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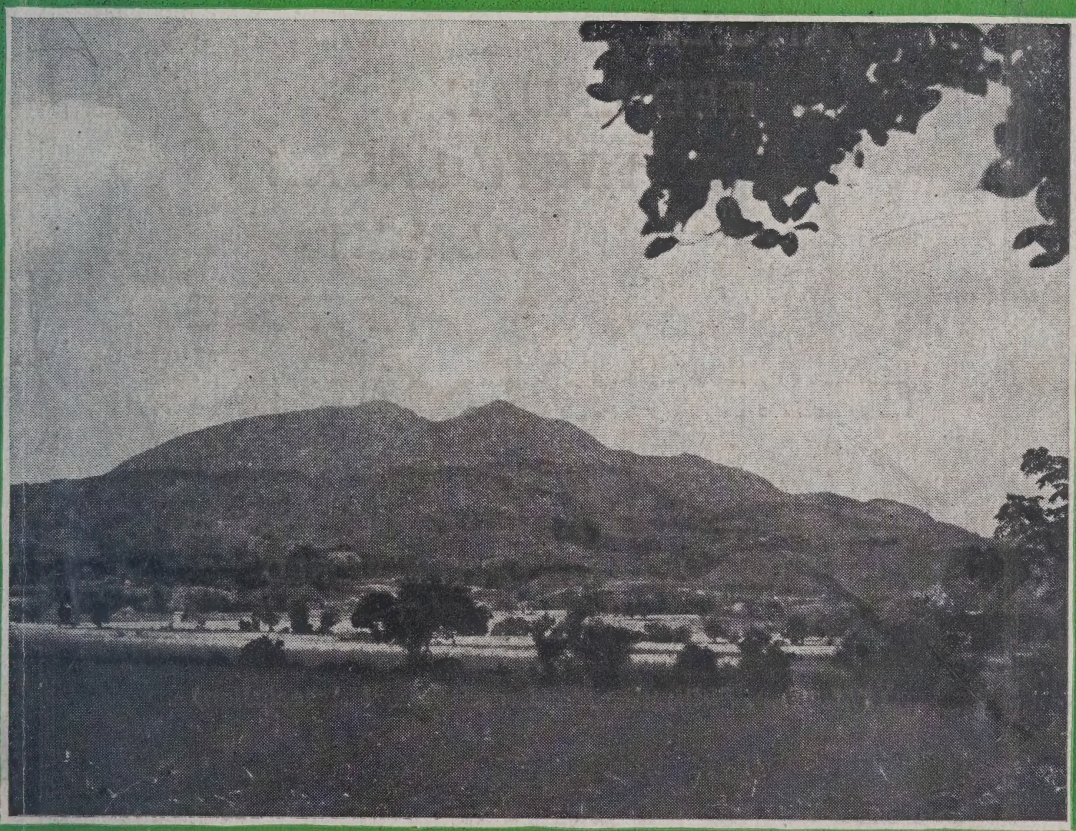
Number 3

The Makiling Echo

JULY, 1930

SCHOOL OF FORESTRY
TWENTIETH ANNIVERSARY NUMBER

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Published Quarterly by the
DIVISION OF FOREST INVESTIGATION
Bureau of Forestry
Agricultural College, Laguna, P. I.

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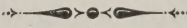
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The Makiling Echo

*Published Quarterly by the Division of Forest Investigation,
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Laguna, P. I.*

Volume IX

JULY, 1930

Number 3


Table of Contents

	Page
A Message from his Excellency, Dwight F. Davis, Governor General of the Philippine Islands	3
A Message from the Hon. Manuel L. Quezon, President of the Philippine Senate	5
A Message from the Hon. Sergio Osmeña, Acting-President of the Philippine Senate	7
Speech of President Rafael Palma of the University of the Philippines	9-10
The Forest School	12-18
The College of Agriculture	21-23
The College of Veterinary Science	25-29
Forest (Sonnet)	30
Greetings from Governor Gifford Pinchot	33
A Letter from Major George P. Ahern	35-39
Significance of the Twentieth Anniversary of the Philippine Forest School	41-44
A Message from Prof. R. C. Bryant	45-47
A Message from the Hon. Jaime C. de Veyra	49
A Message from Representative José G. Sanvictores	50
A Letter from Mr. F. Sherfesees	52
Greetings from Mr. R. B. Weaver	54
A Word of Greeting from Mr. O. W. Pflüeger	54
A Letter from Mr. William Crosby	55
A Radio Telegram from Mr. Roy Nash	56
EDITORIAL	57-59
A Retrospect	61-62
Standardization of Export Lumber	64-65
Characteristic "figure" in Philippine Cabinet Woods	66-71
Shrinkage allowance of Almon and White lauans, Tañile and Red lauans, and Apitong	72-78
The Alumni of the School of Forestry	79-85
Statements made by the Graduates of the School of Forestry on what the Forest School has meant to them	86-90
Directory of the Alumni of the School of Forestry	91-104

Illustrations

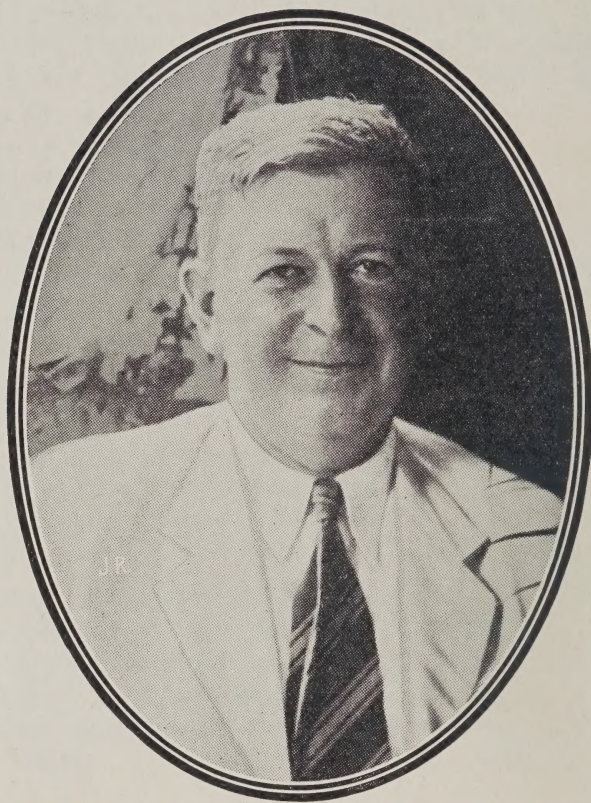
Page

Mt. Makiling	<i>Front Cover</i>
His Excellency, Dwight F. Davis, Governor General of the Philippine Islands	2
Hon. Manuel L. Quezon, President of the Philippine Senate	4
Hon. Sergio Osmeña, Acting-President of the Philippine Senate ..	6
Dr. Rafael Palma, President of the University of the Philippines ..	8
Arthur F. Fischer, Director, Bureau of Forestry and Dean, School of Forestry	11
School of Forestry Building	14
Aeroplane View of the College of Agriculture	20
The Bridge Over Molawin Creek	22
Administration Building—College of Veterinary Science	24
Hon. Rafael R. Alunan	31
Governor Gifford Pinchot	32
Major George P. Ahern	34
First Student Body of the College of Agriculture and the School of Forestry	38
Forestry Campus	39
Florencio Tamesis, Assistant Director, Bureau of Forestry	40
Bagtikan Plantation—School of Forestry	43
Harold Cuzner	44
Hon. Jaime C. de Veyra	48
Present Student Quarters—School of Forestry	51
Forestry Students Working in the School Nursery	53
Division of Forest Investigation Building	60
Forestry Students Constructing a Log Bridge	63
Former Student Quarters—School of Forestry	82
Mauricio J. Oteyza	85



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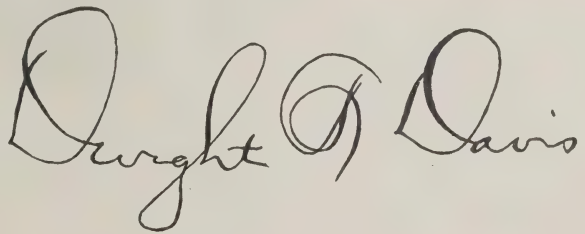
HIS EXCELLENCY, DWIGHT F. DAVIS
Governor-General of the Philippine Islands

**OFFICE OF THE GOVERNOR-GENERAL OF THE
PHILIPPINE ISLANDS**

To the Faculty, Alumni and Students of the Forest School of the University of the Philippines:

Permit me to congratulate you on the celebration of your twentieth Anniversary. The founding of the Forest School has more than justified the investment.

The application of principles of forestry by its graduates, to maintain the balance of nature, to improve the condition of the forest to attain sustained yield, to reforest denuded forest lands, to protect and reserve lands for permanent forest purposes for timber and minor forest products, watersheds, the prevention of erosion, conservation of game, fish and useful birds, forage and last but not least to maintain the attractiveness of scenic and recreational areas, is a work of prime importance in government economics. The largest known natural replaceable resource of the Philippine Islands is in your hands to guard, maintain, utilize and increase, to pass on to posterity.

Dwight D. Davis



HON. MANUEL L. QUEZON
President of the Philippine Senate

A MESSAGE

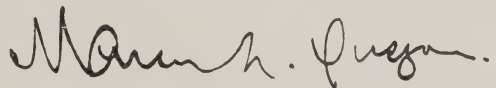
June 6, 1930

Many countries have been grossly negligent in the use of their forests and the Philippine Islands is not an exception. In some of these countries there is either a forest hunger or a timber famine. The situation in our country is not so bad as that, and consequently, we continue to be so thoughtless of the benefits derived from our forest resources.

Each piece of land should be devoted to such use as will give the highest returns. Our prosperity can not be maintained entirely by agricultural development, for our land is not all suitable for agricultural purposes. If the suitability of the soil for cultivation is to be the basis of clearing lands for agricultural and other purposes, at least 46 per cent. of the total land area of the Philippines should remain in forests and the sooner such areas are reserved the sooner our prosperity will be assured by the conservation of our timber supply, of our water supply, both for irrigation and domestic use, and our natural scenery, which is so essential for the normal development of the aesthetic side of our nature, in all of which I am keenly interested.

As stated, forest hunger or timber famine in the Philippines is quite remote. But I would like to see the Filipino people to become aesthetically thirsty, for being so, they would not thoughtlessly destroy beautiful forests for a pittance of camote, rice, or corn in return for their wanton destruction.

I have always been and I am as keenly interested in the School of Forestry as in the conservation of our forest resources, for I know it is the only school that emphasizes the importance of forest conservation, which means conservation also of the soil and water supply so necessary for the development of agriculture and manufacture. The graduates of the School of Forestry should consider themselves the special guardians of these very important resources of the country, and I know that they will always exert their best efforts to these ends.





HON. SERGIO OSMEÑA
Acting-President of the Philippine Senate

A MESSAGE

I greatly appreciate the opportunity that has been given me to send a short message to the Foresters' Convention.

The future of forestry in the Islands is assured, if the good work that has been started is continued and developed. I have been watching with interest the progress of the work of the Bureau of Forestry in general. I am interested in it for it involves the progress of the country also. Forest work is a noble profession. It is a task of a high order to educate the public to the necessity for a better handling of forest resources, to inaugurate a system to eradicate the *cañgin* evil, to initiate a policy of creating and preserving public forests, and to carry out other features essential in laying the foundation for sound forestry practice.

The step that has been taken toward the restoration of the original cover of cogon land not fitted for agricultural purposes is of paramount importance. This line of work should be pushed through, for it is the only way of insuring the needs for timber supply and the unlimited indirect benefits to be derived from it by the present and coming generations. Experience shows that a region like Cebu where the forests are practically gone, the people suffer because timber, firewood and water supply become scarce and also the soils become unsuitable for cultivation. The existing forests, regardless of kind, must be managed properly and utilized wisely for they give us about two million (P2,000,000.00) pesos of forest revenues which are turned over to the insular treasury every year and many other unlimited direct and indirect benefits for the people.

We need to exert more effort on forest conservation publicity in order to arouse public opinion about the importance of forest resources. Likewise, we need proper forest laws. If certain sections of our present forest laws are defective, I am in favor of changing them after a thorough study on each case has been made.

Cebu, Cebu,
June 10, 1930.

✓ Me too



DR. RAFAEL PALMA
President, University of the Philippines

SPEECH DELIVERED BY PRESIDENT PALMA ON THE OCCASION OF THE 20th ANNIVERSARY OF THE SCHOOL OF FORESTRY:

Anniversary celebrations serve the purpose of bringing to mind the significance of events worth remembering and afford an occasion for serious reflection on what has been done and on what remains yet to be done in the light of ideals conceived and realized. The founding of the School of Forestry was the materialization of the worthy purpose of satisfying a vital need in the life of the nation, which is,—of judiciously utilizing and conserving the immense forest resources of the country.

In the review just made by the Presiding Officer, we can readily form an idea of the wonderful results accomplished by the School of Forestry during the brief span of its existence. As he has incidentally pictured to us, this place twenty years ago looked like a lonely spot lost in the immensities of Nature. In its primitive wilderness, it thrived undisturbed and untouched by human enterprise and ingenuity. Giant trees, thick “cogonales” and useless shrubs and thickets were the only decoration of the place!

Today practically every tree that we see around the campus has been planted by our students and selected from the useful varieties that are needed for instruction and experimentation. The inroad of civilization has converted this place into a beautiful and prosperous townsite, a garden of possibilities and unlimited opportunities for service to the nation.

As we gather, therefore, today to celebrate the Anniversary of the School, it is but fitting to remember and to pay our homage of gratitude to those men whose farsight and wisdom have made possible the founding of the school. The experiment has ripened into ascertained usefulness, and the results so far achieved speak well of the work of those who, in some way or other, have taken part in the growth of this school as an agency of service and scientific contribution. And today as we recall to mind the years that have seen the growth of this school from humble beginnings to its present conditions, we cannot but feel inspired by the unlimited power given to the intelligence and industry of man to “make the desert bloom” and thus achieve beneficial and lasting results. Progress has always been attained this way, not by preserving things in their original state but by changing old conditions, and evolving the blind forces of Nature into dynamic elements capable of converting the “raw” into usable commodities for human use.

The mission of this School, as I see it, is not merely to turn out young men whose duty shall be to see to it that the people pay their dues to the government. Rather, it is to propagate scientific information and knowledge on the value of trees and on the judicious use and conservation of our forest resources. When man was ignorant he was destructive and wasteful. He little knew of the laws of conservation and did not realize

the commercial value of trees and forest products. He burnt large areas for his clearings on which he could rear his small crops to meet his limited physical necessities. In other terms, he unknowingly sacrificed greater wealth, than that which he could get out of them. By devastating the forests, he courted the ire of the floods which, descending from the hills, destroyed his dwellings and crops, bringing untold miseries upon him and his kind.

But happily those days are no more. Science has enlightened man on how much wealth lies hidden in the roots, trunks and leaves of the trees in the forest. Now, as never before, he realizes that, upon their judicious use and conservation, depends the life and prosperity of the nation. If primitive ignorance did rule, if we did allow our peoples to strip our mountains and ridges of their vegetation, the lumber industry, which is today one of the most important industries and which represents investments amounting to millions of pesos, would not have existed.

The School of Forestry can rightly claim credit for the rapid diffusion of scientific information concerning our national forest resources. Its studies in botanical specimens constitute an invaluable contribution to the stock of human knowledge. The graduates of this school have increased in number, and under the expert guidance and control of the officials of the Bureau of Forestry, with which the School is intimately connected, they have scaled our mountain fastnesses, and not only have they collected revenues due the government, but have prevented disastrous wastes by educating the people in the value of forestal wealth, such that today we can rest confident that through the work of the Bureau of Forestry and this School, this valuable patrimony of our people will be properly utilized and preserved for the benefit not only of the present generation but of all generations to come.

I want to urge upon our youth the dignity and importance of the career of the Ranger or Forester, if the youth feel in their hearts the duty of serving their country. We have recently inaugurated a new policy of opening more facilities to our young men in order that they may take advantage of the opportunities offered by the School. I have every hope that under this new policy we will be able to increase the number of rangers and foresters of which our government, I understand, is much in need. In embracing this calling, a challenge beckons to a greater and more sincere public service. Every graduate who goes out from this school carries in his hands a mission of incalculable value to all the people of these Islands and upon the successful discharge of which will depend, to a great extent, the success of this institution. He should not be obsessed solely by the idea that his mission is confined to the collection of revenues and investigating that people pay their license. Important as this duty is, it is even more important that he realizes his greater scientific mission—that he is equipped with tools to spread the blessings of Science among the masses of our people so that he may arouse their consciousness in the proper utilization and conservation of our natural resources, and thus make them see their obligation to posterity.



ARTHUR F. FISCHER
Director, Bureau of Forestry
Dean, School of Forestry

THE FOREST SCHOOL

By ARTHUR F. FISCHER

Director, Bureau of Forestry, and Dean, School of Forestry

After the establishment of the Bureau of Forestry under General Orders No. 50 by the Military Government (being the first Government bureau established under the American flag), it was soon apparent that trained field personnel was needed. A few of the rangers of the old Spanish "Inspección de Montes" were retained and an organization was effected. Technically trained university men from the United States were recruited for the forestry work and discharged volunteer officers and men were employed for administrative assistants. Filipino personnel for rangers and guards were recruited by the technical and administrative American personnel in the districts where they worked. It soon became evident to the higher staff that it was too great a burden to teach and train Filipinos who lacked the necessary background while carrying on their daily tasks in the field.

Forester R. C. Bryant (now Manufacturers' Association Professor of Lumbering at the Yale Forest School) while Assistant Director of Forestry in 1903, established the Lamao Forest Reserve for technical and scientific studies with the additional purpose of using it as a training ground for Filipino personnel and finally establishing a school. This school did not materialize but was discussed. In the Foresters Conference of 1909 it was again taken up. Forester Hugh M. Curran and Dr. E. B. Copeland looked over the available areas in the vicinity of Manila with the object of locating a site for an

Agricultural College with a forestry department. Los Baños was chosen, the land acquired and the Forest Reserve established.

Forester Royal F. Nash on December 13, 1909, wrote a lengthy letter to the Director of Forestry, urging the immediate establishment of the school in which he says: "The facts that make such a school an imperative need are so patent that the matter requires little discussion.

"Dr. Fernow gives a concept of government which is peculiarly applicable to the Forest Service, namely, 'the instrument to secure the possibility of not only social life but of social progress, the representative of communal interests as against private interests, of the future as against the present'. That is a concept which every forest officer should have as a background to each decision that he makes, the progressive and abiding interests of society should be more concrete to him than the most urgent demand of any individual in conflicting interest; but it is a thought that does not come to the unreflective mind. It takes study to assimilate a sufficient quantity of the world's accumulated knowledge to be able to look at problems from a universal vantage point; close pondering over the facts of the world's needs compared to the world's supply is necessary before a man who has always lived in sight of an extensive virgin forest can see the need of utilizing that forest economically; nevertheless, this is a viewpoint which must be injected into every

vein and capillary of this forest service before it will begin to subserve its proper social functions.

"Second only in importance to his social philosophy, is a forest officer's understanding of the natural forces which he endeavors to utilize and to mould. He must have knowledge of the changes taking place constantly in the forms of the land itself, of the life processes of the forest growth which springs therefrom. More than this, he must know how to utilize nature so as to subserve social needs most economically.

"Yet having all this, his philosophy, his understanding, his technique may still amount to naught unless he combine therewith knowledge of how to live, the faculty of getting on with men, and above all a high appreciation of the value of his work.

"The executive work of the forest service here, as in India, is being

"To expect the American foresters to impart the requisite discipline to their subordinates while attending to the multiple details of administration, is to build on a foredoomed hope. India tried that fallacious plan; we do not need to duplicate her mistakes.

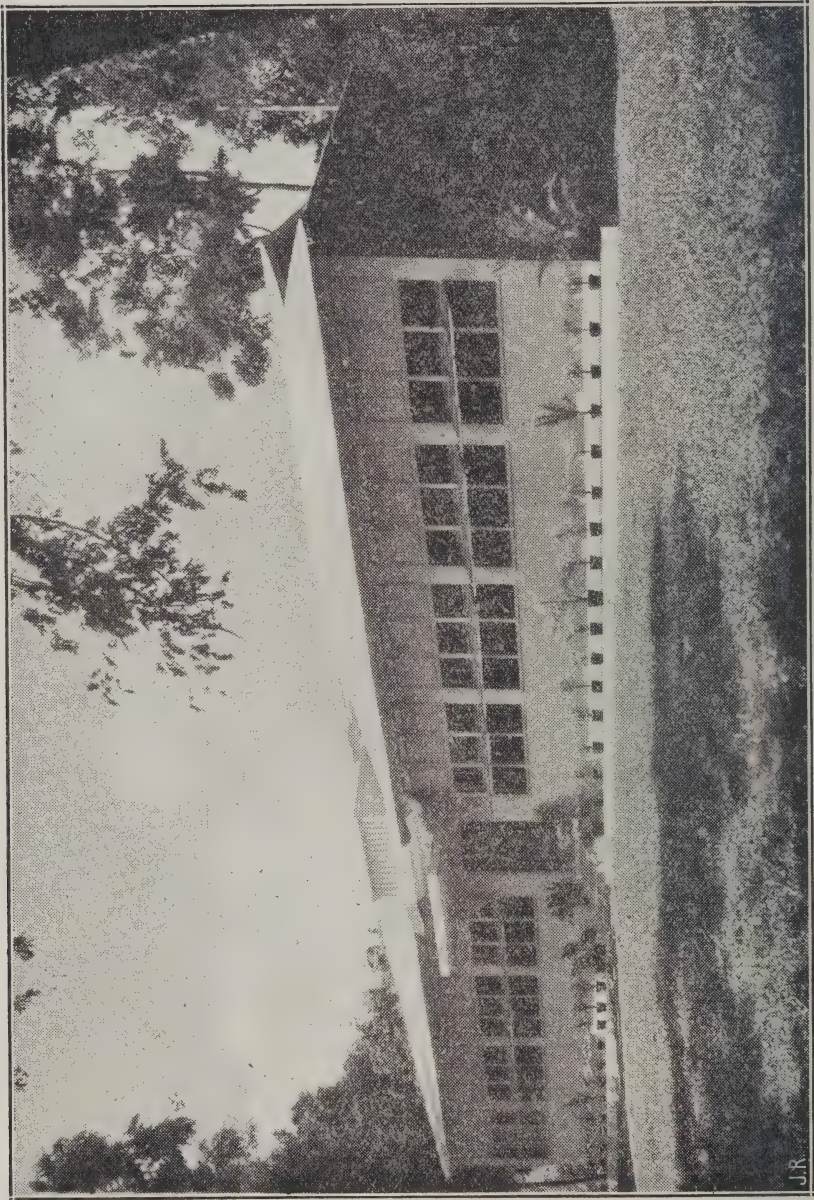
"Of absolute necessity, I repeat, then, is the immediate founding of a Philippine School of Forestry, a necessity so paramount we could well afford to drop entirely our dabbling administrative efforts for a year if necessary to secure the requisite funds. The opportunity is made easy by the presence of the Agricultural College at Los Baños, the site chosen as most available for a forest school."

This letter resulted in definite action and a course of study as follows was submitted to the Board of Regents of the University on February 15, 1910:

Junior Year		Vacation	Senior Year	
Physiography and Soils	Physiography and Climatology of the Philippines	Lumbering	Wood Technology	
Geometry	Trigonometry and Surveying	Forest Mensuration	Surveying	Forest Engineering
Forest Botany	Silvics	Horses, Camps and Packing	Silviculture	
Mapping	Law and Procedure		Forest Economy	

done and should continue to be performed by native Rangers. Their efficiency measures precisely the efficiency of the organization as a whole; the finest calibre of intelligence in the directing staff amounts to nothing if the subordinates who must be relied upon to carry out directions are innocent of all the qualifications I have above outlined.

Forester Nash was assigned as Instructor of Forestry in charge of the Forest School of the College of Agriculture in June, 1910. Students were selected from eligibles throughout the Islands and paid ₱20.00 per month, with quarters. The students reported by June, 1910 and the school was a fact. Nipa houses were used for quarters, mess hall and class



School of Forestry Building

J.R.

rooms in the Agricultural College. The Division of Investigation was transferred to Los Baños early in 1911 and Dr. H. N. Whitford, the chief, with Forester Curran and Dr. F. W. Foxworthy, were available for instruction in Forestry subjects. Forester Nash resigned from the service and Forester D. M. Matthews was assigned to take his place. The writer soon after his arrival in August, 1911, was assigned to the Division of Investigation and taught in the Forest School.

Some ten Chinese students supported by Chinese funds were graduated for work in China, two Chamorros from Guam, and the British North Borneo Government supported Filipinos under scholarships for their Forest Service of whom some 11 were graduated.

In 1915, the School granted two B.S.F. degrees to Antonio P. Racelis and Aniceto Villamin. The higher course leading to the degree of B.S.F. was formally instituted in June, 1923, graduating Jose F. Nano in that year and was made to conform to standards of the Forest Schools of the United States. Four men were graduated in 1928 from this course.

The total number of graduates of the Forest School is 381 of whom 232 are employed in the Bureau of Forestry, 17 with lumber companies and 23 in foreign countries in forestry. Many of the graduates are serving in various Government bureaus, the Manila Railroad, and as officers in the U. S. Army and the Constabulary.

Since the year 1912 the Forest School has annually graduated classes of about twenty men, who have all received appointments as rangers in the Bureau of Forestry.

The Forest School was under the College of Agriculture until April 1,

1916. On February 4, 1916, Act No. 2578 was passed creating a school in the University of the Philippines to be known as the Forest School, which shall embrace all work hitherto carried on in the Forest School of the College of Agriculture of the University of the Philippines. The school buildings and quarters are located within the Makiling Forest Reserve, thus making the Reserve, which embraces the entire public forest on Mount Makiling, containing many of the principal forest types of the Philippines, available and easily accessible to the students for all kinds of field work necessary for a complete course in Forestry, with the exception of steam logging and sawmilling; for field work of this nature, some extensive lumbering operations is chosen.

A radical change has been made in the curriculum of the School of Forestry, by which the school is put on a proper collegiate basis. For the two-year course leading to the certificate of Ranger, there has been substituted a four-year course leading to the degree of Bachelor of Science in Forestry.

At the same time, the requirements for entrance have been raised and henceforth only graduates from high schools, or other schools officially recognized as of equal rank, will be accepted. As before, candidates for admission will be required to pass a physical examination to determine their fitness for the work of a forest officer. Also, none will be accepted unless they present recommendations from responsible persons testifying to their high moral standard, which standard they will be expected to maintain while in the school.

The pensionado system, by which students were maintained at government expense during the entire two years of the Ranger course, has been abolished. However, the new course of study, the outline of which is outlined below, offers certain advantages to such students as may not be financially able to complete the course in four continuous years. Students who complete the first year only will be eligible for appointment as Forest Guards or Guard Scalers in the Bureau of Forestry. Those who complete the first two years work will be eligible, as under the old curriculum, for employment as Rangers. Thus a student may make a break in his course and, while employed, save money for continuing it later.

The demand for technically trained men in forestry work, both in the government service and in private lines, is continually growing, with the result that students completing the entire course, or even the first two years of it, will be practically certain of obtaining positions.

The Forest School is filling successfully its mission in preparing men for public and private service in Forestry and its allied industries. Much of the reputation of the Bureau of Forestry is due to the School in its character—forming qualities, the results of which are seen in the work of each graduate.

THE NEW CURRICULUM APPROVED
BY THE BOARD OF REGENTS OF
THE UNIVERSITY OF THE
PHILIPPINES IS AS
FOLLOWS:

- 1. Requirement for admission: High School graduate.
- 2. Requirements for graduation: 155 hours exclusive of summer work.
- 3. Description of courses:

FIRST YEAR
1ST SEMESTER

	<i>Credits</i>
General Botany	3
English I	4
Mathematics I	4
Dendrology I	4
Forestry I (Elements)	2
Woodcraft and First Aid	2
Military Science	+3
	<hr/> 19+3

2ND SEMESTER

	<i>Credits</i>
General Botany	3
English I	4
Engr. I (Surveying and Mapping) .	4
Dendrology I	4
Economics (Principles)	2
Mensuration	3
Military Science	+3
	<hr/> 20+3

Summer—To be spent on a permanent camp. Timber estimating and map making. Required.

SECOND YEAR
1ST SEMESTER

	<i>Credits</i>
Wood Technology I	5
Administration	3
Forest Physiography	3
Silviculture I (Nursery)	3
Engineering II (Construction-Improvement)	3
Spanish	3
Military Science	+3
	<hr/> 20+3

2ND SEMESTER

	<i>Credits</i>
Wood Technology II	3
Administration	3
Physics	5
Silviculture II (Seeding and Planting)	3
Logging and Lumbering	3
Spanish	3
Military Science	+3
	<hr/> 20+3

(Students completing the regular 4-year course without interruption should take Forestry Pathology and Forest Entomology

during the second year and Forest Administration during the fourth year.)

Summer—Field experience in some line of forestry work either in the government service or in lumber companies.

THIRD YEAR

1ST SEMESTER

	<i>Credits</i>
Chemistry I	5
Forest Economics	2
Wood Preservation (Wood Technology III)	3
Silviculture III (Silvics and Practice)	3
Foreign Language	3
Soil Technology	3
	<hr/>
	19

2ND SEMESTER

	<i>Credits</i>
Chemistry I	5
Policy and History	2
Forest Protection	2
Advance Mensuration	3
Foreign Language	3
Forest Products	3
Elective	2
	<hr/>
	20

Summer—Logging, Engineering, Saw-milling, or other forestry work.

Required: At least 10 hours credit.

FOURTH YEAR

1ST SEMESTER

	<i>Credits</i>
Forest Valuation and Finance	2
Forest Pathology	3
The Lumber Industry	3
Foreign Language	5
Seminar	2
Elective	4
	<hr/>
	19

2ND SEMESTER

	<i>Credits</i>
Regulation and Working Plans	3
Forest Entomology	3
Seminar	2
Elective	10
	<hr/>
	18

SUGGESTIVE ELECTIVES:

	<i>Credits</i>
1. Organic Chemistry (2 semesters)	10
2. Soils .....	..
3. Grazing	3
4. Business Law	3
5. Arboriculture	2
6. Zoology	5
7. Ecology	2
8. Geology	3
9. Rural Economics .....	..
10. Accounting	5
11. Surveying (Advanced) .....	..

This new curriculum takes effect this school year (1930-31). The new class will start in the first week of June instead of April.



"To the forester, the forest shows another side than to either savage, settler, artist, hunter, or naturalist. He is often nearer the naturalists of the old school than most overspecialized scientists of today. The ways of the furred and feathered are less mysterious to him than the ways of man; he sometimes kills as part of the day's work, but he never forgets they are his special wards. Upon a canvas of a thousand square leagues he dares design patterns of beauty and utility which require centuries to work out in detail. Upon occasion his medium masters him and he reverts to savagery. But above all and before all, the forester is a scientist with a social viewpoint. Man's need, not of today alone, but down the rippling centuries, is the scale wherein he weighs all values."

—ROY NASH.

FACULTY OF THE SCHOOL OF FORESTRY

Arthur F. Fischer, C.E. (Ohio Northern Univ.) ; M.F. (Yale University)

Professor of Tropical Forestry.

Dean, School of Forestry.

Director, Bureau of Forestry.

Harold Cuzner, B.S.F. (University of Minnesota)

Professor of Silviculture and Physiography.

Forester, In Charge, School of Forestry.

H. M. Curran, F.E. (Cornell University)

Professor of Tropical Forestry.

Forester, Bureau of Forestry.

Luis J. Reyes, B.S. (Syracuse University)

Professorial Lecturer on Wood Technology.

Forester-Wood Technologist, Bureau of Forestry.

Chief, Division of Forest Products.

Antonio P. Racelis, B.S.F. (University of the Philippines) ; M.S.F. (University of Michigan)

Forester, Bureau of Forestry.

Associate Professor of Forest Engineering.

E. E. Schneider, B.L. (University of Cincinnati)

Assistant Professor of Modern Languages.

Carlos Sulit, M.F. (Yale University)

Chief, Division of Forest Investigation.

Assistant Professor of Forest Management.

Anne L. Pendleton

Assistant Professor of English.

Doroteo Soriano

Forester—Forest Surveyor, Bureau of Forestry.

Assistant Professor of Surveying.

Calixto Mabesa, B.S.F., M.F. (Syracuse University)

Lecturer on Wood Technology.

Forester, Bureau of Forestry.

Felipe Salvosa, B.S.F. (Syracuse University) ; M.S. (Harvard University)

Alejandro de Mesa, M.F. (Cornell University)

Forester—Entomologist and Pathologist, Bureau of Forestry.

Mamerto D. Sulit, Graduate Ranger

Ranger, Bureau of Forestry.

Assistant in Dendrology

Ricardo Buhay, Graduate Ranger

Ranger, Bureau of Forestry.

Assistant in Wood Technology.

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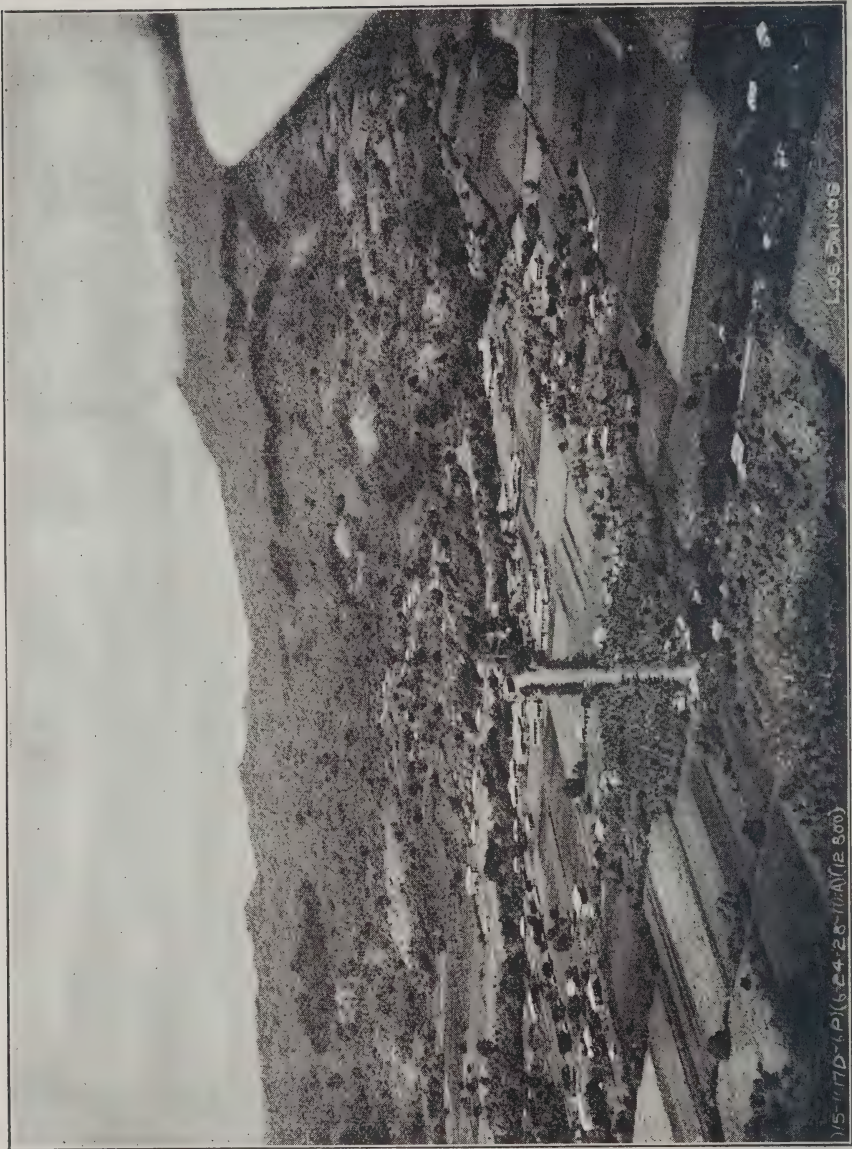
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LOS BAÑOS

Aeroplane View of the College of Agriculture

THE COLLEGE OF AGRICULTURE

By B. M. GONZALEZ
Dean, College of Agriculture

The College of Agriculture was the first college established under the University of the Philippines. It "opened its doors" on June 14, 1909 in the house of the Dean at Los Baños with a faculty of five and an enrollment of fifty-six students the first year.

For about two years previous to the establishment of the school, and even before the passage of the act founding the University of the Philippines, Dr. E. B. Copeland, then instructor of Botany in the Philippine Normal School, had under consideration the establishment of an Insular Agricultural School under the auspices of the Bureau of Education—the institution to be the highest agricultural school in the Islands. When it was decided to establish a University as an independent entity from the Bureau of Education, a site for this agricultural school had already been selected. All that was necessary was for the University to purchase it instead of the Bureau of Education.

In considering possible locations for the College the suitability of the site for the establishment of a forest school as an adjunct of the College was always kept in mind. The present site of the College at Los Baños fully satisfies all expectations for both the College of Agriculture and the School of Forestry. The original faculty of the College of Agriculture consisted of:

Edwin Bingham Copeland, Ph.D.
Dean and Superintendent

Harold Cuzner, B.S.F. Farm Superintendent

Edgar Madison Ledyard, Instructor in Zoology and Secretary of the Faculty

Carrie Stein Ledyard, Instructor in Modern Languages

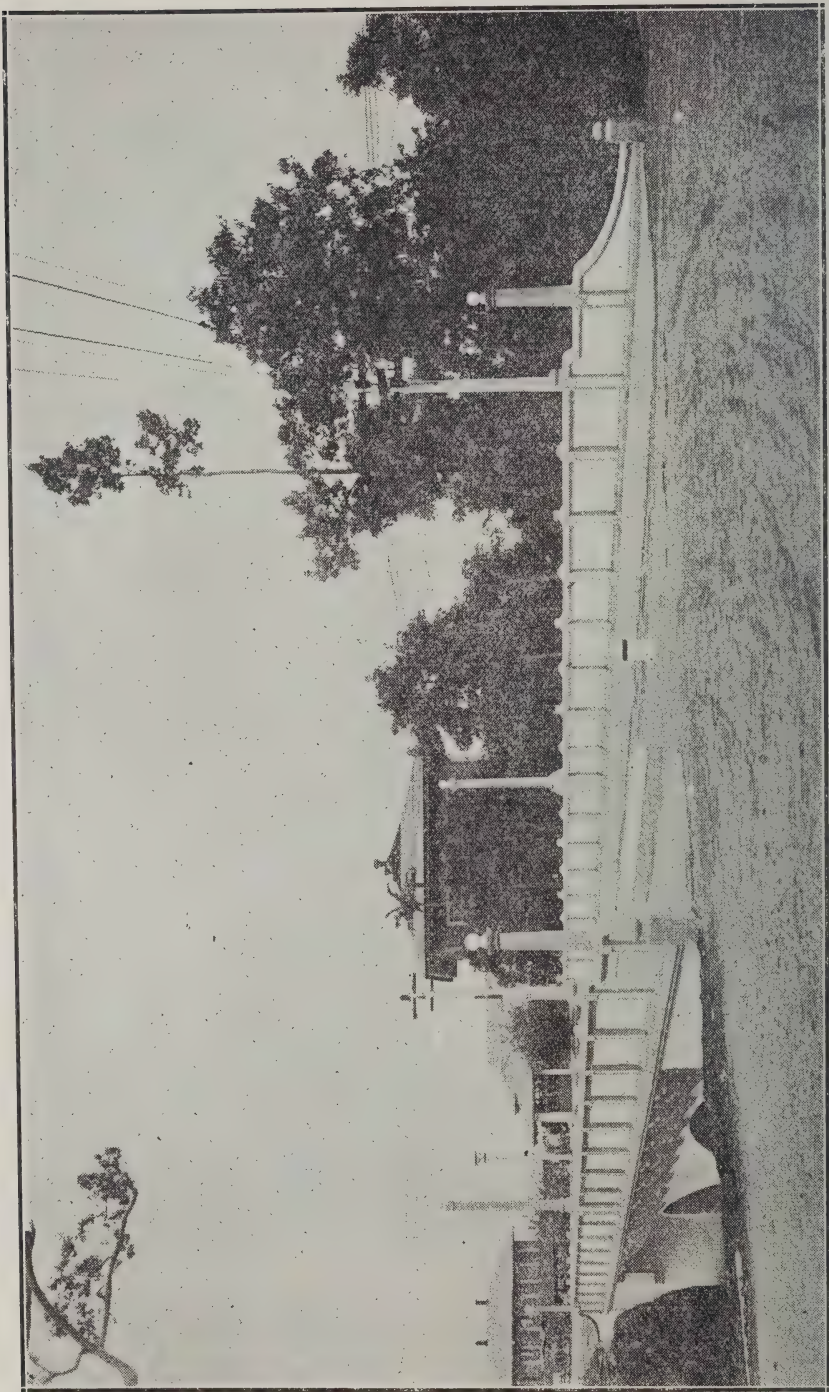
Sam B. Durham, B.S. Instructor in Animal Husbandry

To Doctor Copeland belongs largely the credit for whatever merit the College can lay claim to. It was he who looked into the details of its physical organization, it was he who overcame the apathy and contrariness with which new enterprises are usually received. And more than anyone else he endowed the institution with its present idealism. Doctor Copeland held the position of Dean from June 14, 1909 to August 30, 1917, when he resigned and returned to the States to engage in rice farming.

The next dean of the college, and the one who gave concrete expression to many ideas of Dean Copeland was Professor Charles Fuller Baker. He occupied the deanship from September 27, 1917 to his death on July 22, 1927. By actual demonstration he showed the soundness of the basic ideals Dean Copeland had for the College. Among these ideals were:

1. That it should develop agricultural leadership in the Islands.

2. That it should become a research center in agriculture and in the sciences fundamental to agriculture.



The Bridge Over Molavin Creek

3. That its efforts should always be for the service and the betterment of the State.

How well the College is making these ideals living realities facts show. Practically all those directing the agricultural development program of the government are graduates of the College. In private agricultural enterprises, graduates of the College are steadily occupying more and more important technical positions. More original research work is being accomplished at Los Baños than anywhere else in the Islands, and many Los Baños trained men have been recruited by such entities as the Bureau of Science and the Bureau of Agriculture with the specific end in view of bolstering up their research programs.

The standards set in Los Baños in the training of scientific workers are generally recognized as of the highest type, and *The Philippine Agriculturist*, wherein is published most of what is done on the Campus, has a standing on a par with the best scientific agricultural journals of the world.

The College, while always striving for betterment, is fairly well equipped for its program of work. It has approximately 400 hectares of land, a building or more for each line of work, well equipped laboratories, and a faculty of about one hundred members. The approximate valuation of the College plant is ₱1,110,000 and the yearly appropriation for support is approximately ₱375,000. The College has a capacity for about 600 students in the collegiate division

and 300 in the Rural High School, which is the training division of the Department of Agricultural Education. The College regularly awards the degree of Bachelor of Science in Agriculture but maintains special courses in Sugar Technology, Animal Husbandry, and Agricultural Education. Advanced work is offered for the Master's degree. Graduates of the College are admitted with full standing as candidates for higher degrees in the best universities of America, as Wisconsin State, Cornell, Illinois State, Leland Stanford Junior, Chicago, Johns Hopkins, Harvard, Columbia, and Yale.

The instructional and technical work of the College is organized into the following departments:

- Agricultural Chemistry—F. O. Santos, Ph.D., Head
- Agricultural Education—M. A. Foster, M.S., Head
- Agricultural Engineering—A. L. Teodoro, Ph.D., Acting Head
- Agronomy—N. B. Mendiola, Ph.D., Head
- Animal Husbandry—B. M. Gonzalez, D.Sc., Head.
- Animal Husbandry—V. Villegas, Ph.D., Assistant Head
- English and Modern Languages—E. S. Yule, B.Di., Head
- Entomology—L. B. Uichanco, D. Sc., Head
- Plant Pathology—G. O. Ocfemia, Ph.D., Acting Head
- Plant Physiology—R. B. Espino, Ph.D., Head
- Rural Economics—J. Velmonte, A.B., In Charge



Administration Building—College of Veterinary Science

THE COLLEGE OF VETERINARY SCIENCE

GREGORIO SAN AGUSTIN

Dean, College of Veterinary Science

The College of Veterinary Science, which was created by an act founding the University of the Philippines on June 18, 1908, should have been opened in 1909; but because of shortage of certain equipment and of housing facilities, it was unable to begin work until June, 1910. Personnel of the Bureau of Agriculture took charge of instruction under the acting deanship of Dr. Archibald Robinson Ward, who later became dean up to 1914.

Before the College opened its doors, circulars setting forth the objects and the future of veterinary medicine and entrance requirements had been sent out to various division superintendents of the Philippine public schools. Completion of high school course of the Bureau of Education or its equivalent, which was determined by presentation of certificates or by passing an examination given by the College, was necessary for admission. The curriculum required five years' work, on the completion of which the degree of Doctor of Veterinary Medicine (D.V.M.) was granted.

Because the possibilities of the profession were little known at that time, there was then no enthusiastic response. The College in its first year had only ten students. The Government, however, realizing the important mission of the College, created a scholarship fund by Act No. 2040, which was enacted February 3, 1911, by the Second Philippine Legislature. The following are its salient features:

An Act to appropriate the sum of P3,500 for the creation of Government Scholarship in the College of Veterinary Science of the Philippine University.

Sec. 1. Twenty-five Government Scholarships for Filipinos are hereby created in the College of Veterinary Science of the Philippine University to be filled subject to the rules provided by the Board of Regents of said University; provided that there shall not be more than ten of the scholarships for the first year of said college.

Sec. 2. The sum of P3,500 is hereby appropriated out of any funds in the Insular Treasury not otherwise appropriated to carry out the provisions of this Act mentioned in the preceding section during the first year.

Sec. 3. The public good requiring the speedy enactment of this bill, the same shall take effect on its passage in accordance with Sec. 1 of Act 145 of the Philippine Legislature.

In 1914, by Act No. 2302, of the Third Philippine Legislature, the number of scholarships was reduced from 25 to 20 valued at P35.00 each. Besides the Insular Government scholarships, there were also created municipal and provincial, as well as private scholarships, such as those given by Mr. Limjap.

The College was originally quartered in three reenforced concrete buildings, adjoining the quarantine yards of the Bureau of Agriculture in Pandacan. These housed the lecture room, the anatomy laboratory, and

the clinics. A large part of the first three-year work in laboratory subjects was given in the old Philippine Medical School, which has since been incorporated with the University of the Philippines as the College of Medicine and Surgery.

In 1913, under the same dean, the buildings adjoining the San Lazaro Hospital, at the corner of Tayuman Street and Rizal Avenue, were acquired. Classes thereafter were held both in Pandacan and in San Lazaro. In 1914, the College completely abandoned its buildings in Pandacan. In San Lazaro, it occupied a two-story building which housed the faculty offices, class rooms, and anatomy laboratory. In addition, there were large sheds and stables for large-animal and small-animal clinics, and properly screened stables for quarantining animals suffering from infectious and contagious diseases. Additional laboratory instruction in the allied sciences was given at the College of Medicine and Surgery.

In the same year, upon the resignation of Doctor Ward, Dr. William H. Boynton was appointed dean. During the first semester, he took leave, and Dr. Eustace S. D. Merchant was made acting dean. Classes were continued in Manila until the year 1919, when the Board of Regents, believing that the College would give greater benefit to the country by operating it side by side with the College of Agriculture, passed a resolution transferring it to Los Baños. As an initial step toward this end, the first and second years were conducted in Los Baños, and classes for the third, fourth, and fifth years in Manila. The College was then divided, with Dr. Angel K. Gomez as in charge at Los Baños and Dr. Victor Buencamino in charge of the Manila branch.

In 1919 another significant event happened when the College was recognized and added to the list of accredited veterinary colleges in the United States. The following year brought the entire college to Los Baños. The Dean of the College of Agriculture, the late Charles Fuller Baker, was acting dean of the College during its organization in Los Baños.

In 1920 a number of experienced professors resigned, rather than stay in Los Baños. They were replaced by new graduates imported from the United States under the acting deanship of Alonzo S. Shealy, who was made permanent dean the following year.

A concrete single-story building situated at the entrance of the College Campus lodged the laboratories for pathology and bacteriology, pharmacy, and some of the faculty offices. A large nipa shed with several stalls served as temporary quarters for the hospital and feed room. The other departments and laboratories were housed in buildings of the College of Agriculture. The two colleges worked in close cooperation; reciprocal courses were given for the students of both institutions.

From 1919 to 1924, the enrollment of the College steadily declined to such an extent as to give some concern to the authorities of the University. The Board of Regents formed a special committee from the Colleges of Veterinary Science and Agriculture to investigate the feasibility of uniting the two Colleges. After a thorough investigation, the Board of Regents followed the recommendation of the committee that the College of Veterinary Science should remain separate. The following month, however, the same question was again taken up. The special commit-

tee, which was already formed, met on August 19 and on October 23, 1924. The result was a recommendation, which was approved by the Board of Regents on October 30, 1924, as follows:

The length of time prescribed for graduation in the College of Veterinary Science, which is five years, is not commensurate with the limited opportunities now open to scientific veterinarians, and if the college is to remain open indefinitely, its courses should be shortened to four years.

Doctor Shealy having resigned in 1924, Dr. Gregorio San Agustin was made acting dean and in 1925, permanent dean. In compliance with the resolution of the Board, the course was shortened from five to four years. It will be noticed from the following curriculum, when compared with the five-year course, that only the cultural courses were eliminated. The other changes were mere consolidations of courses with the same subject matter. The curriculum was, moreover, greatly strengthened in animal husbandry and in parasitology.

THE FOUR-YEAR CURRICULUM

(Leading to the degree of Doctor of Veterinary Medicine (D.V.M.). Open to graduates of approved four-year secondary schools)

FIRST YEAR

<i>First Semester</i>			<i>Second Semester</i>		
	<i>Hours</i>	<i>Units</i>		<i>Hours</i>	<i>Units</i>
A. Chem. 1a	9	5	A. Chem. 1b	9	5
V. Zool. 1	9	5	V. Hst. 1	8	4
V. Anat. 1	11	5	V. Anat. 2	14	6
V. Embr.	5	3	V. Bot.	2	2
			A. Husb. 1	3	3
Total	34	18	Total	36	20

SECOND YEAR

	<i>Hours</i>	<i>Units</i>		<i>Hours</i>	<i>Units</i>
A. Chem. 3	9	5	A. Chem. 3	9	5
V. Anat. 3	11	5	V. Anat. 4	8	4
V. Bact. 1	8	4	V. Bact. 2	8	4
A. Husb. 2	6	2	V. Phs. 1 (B)	4	2
V. Phs. 1 (A)	5	3	V. Phar. 1	5	3
			A. Husb. 2	6	2
Total	39	19	Total	40	20

THIRD YEAR

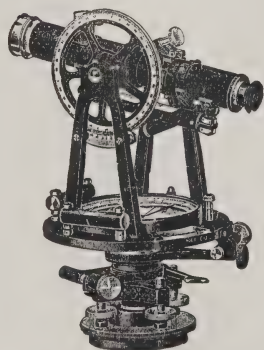
	Hours	Units		Hours	Units
V. Phar. 2	6	4	A. Husb. 4	3	3
V. Med. 1	2	2	V. Med. 2	3	3
V. Path. 1	8	4	V. Path. 1	4	2
V. Clin. Diag.	3	3	V. Surg. 1	3	3
V. Parasit. 1	4	2	V. Parasit. 2	4	2
A. Husb. 3	3	3	H. Shoeing	3	1
V. Clin. 1	9	3	V. Hyg. 1	3	1
			V. Clin. 2	15	5
<hr/>			<hr/>		
Total	35	21	Total	38	20

FOURTH YEAR

	Hours	Units		Hours	Units
V. Hyg. 2	1	1	V. Jur.	1	1
V. Surg. 2	3	3	V. Hyg. 3	1	1
V. Path. 2	2	2	V. Surg. 2	3	3
V. Med. 3	2	2	V. Med. 5	5	5
V. Med. 4	3	3	V. Obst.	3	3
V. Parasit. 3	4	2	V. Path. 3	4	2
V. Surg. 3	5	1	V. Autop. 2	3	1
V. Autop. 1	3	1	V. Clin. 4	15	5
V. Clin. 3	15	5			
<hr/>			<hr/>		
Total	38	20	Total	35	21

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It will be noticed that since the inauguration of the new curriculum, in 1925, enrollment has been steadily improving. Other improvements have been in the form of additional buildings for accomodation of the small-animal clinic, postmortem examination, horseshoeing, recovery ward, and quarantine were constructed. Shortly after, the departments of anatomy, parasitology, and physiology, that had been lodged in some of the buildings of the College of Agriculture, were moved to a new one-story building, situated at the entrance of the College Campus, opposite the first concrete building of the College which was constructed upon its transfer to Los Baños.

The Board of Regents on October 14, 1926, approved the reduction of allowance in government scholarship from P35.00 to P25.00 each, the amount saved to be used to defray the expenses of one or more members of the faculty pursuing postgraduate work abroad.

In 1926, the six-year combined veterinary and animal husbandry curriculum was introduced. The first four years of work are taken at the College of Agriculture, at the conclusion of which the degree of B.S. Agr. is granted; the last two years, at the College of Veterinary Science, leading to the degree of D.V.M.

Veterinary graduates have been in demand and the College is now better equipped than ever before both in laboratory and lecture facilities. Indeed, with the present improved condition, it can be said that the future of the College of Veterinary Science and its graduates is assured. This is due partly to the growing knowledge of the Filipinos

regarding veterinary medicine and the expanding interest in animal industry and agriculture. The graduates of the College are all holding positions of responsibility, the majority of them connected with the Bureau of Agriculture, Bureau of Education and University of the Philippines. Some, however, are engaged in private practice. There are at present 108 graduates of the College of Veterinary Science. Five others were taken from the ranks by death.

The financial support which the College has been getting is not commensurate with its growth. The enrollment of the present academic year is very much higher than that of 1921-1922; but the appropriation is 39 per cent less than in that year.

The College of Veterinary Science is the only one of its kind in existence in this country and considering the fact that it has a definite function to perform in our national life in relation to agriculture, whole-hearted and generous support should be given in order to make this institution a first class center of investigation and research along lines of veterinary medicine. Japan has considerably smaller animal population than ours in the Philippines, and yet that country supports twenty-one veterinary schools. To carry out successfully our program of investigation and research, it has been our aim to provide the institution with a sufficient number of highly trained men to constitute the faculty. It is only by this means that our people can look to us with confidence and reliance for the solution of the many complex problems which seriously affect the live stock industry in the Philippines.

FOREST
(*Sonnet*)

Where cold and sweet you feel and breathe the air,
 And mirthful wooing birds all the while sing
 Enchanting lays of love that seem to ring
 In lulling rapturous notes here and there;
 Where murmuring streams there you hear to pair
 Its mystic sounds with rushing winds that swing
 And open the canopy stop a spring,—
 And lets the sun shoot in some struggling sunbeams fair.
 The foliage green bespeaks of lives that grow
 'Midst seeming calm that soothes our mortal pains;
 In morn it throws a radiant greenish glow
 Which beauty spreads o'er nearby laying plains;—
 It yonder stands—splendid Nature's show—
 In silence yielding man's comfort and gains.

—*Selection.*

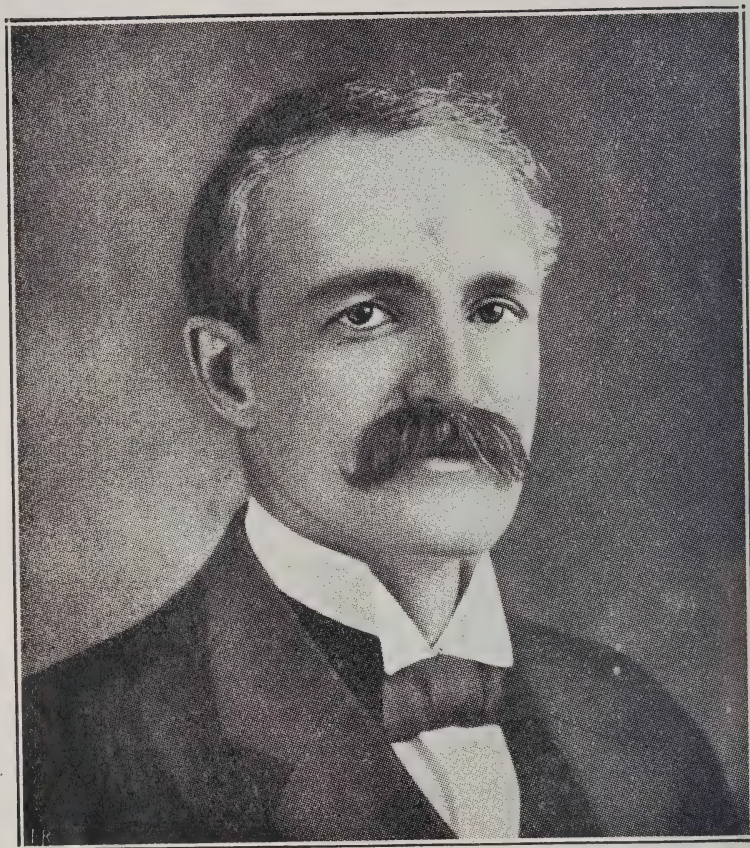


What has thus happened in Northern China, what has happened in Central Asia, in Palestine, in North Africa, in parts of the Mediterranean countries of Europe, will surely happen in our country if we do not exercise that wise forethought which should be one of the chief marks of any people calling itself civilized. Nothing should be permitted to stand in the way of the preservation of the forest, and it is criminal to permit individuals to purchase a little gain for themselves through the destruction of the forests when this destruction is fatal to the well-being of the whole country in the future.

—*Theodore Roosevelt.*



HON. RAFAEL R. ALUNAN
Secretary of Agriculture and Natural Resources



GIFFORD PINCHOT

*Former Chief, U. S. Forest Service
Former Governor, State of Pennsylvania
(Leader, Conservationist, Forester)*

GREETINGS FROM GOVERNOR GIFFORD PINCHOT

In 1902 I spent two delightful months in the Philippines, and it was then that I first came into touch with the idea that was several years later to take form and substance as the School of Forestry of the University of the Philippines. Major George P. Ahern and I had several weeks travel among those wonderful forests, and we had a great deal of study and discussion of policies and plans of forest laws and regulations.

Among those plans we talked of, none seemed to me more important and inviting than Major Ahern's plan to create a School of Forestry. Ahern and I talked about it enthusiastically and at length. And later—on each of several of the Major's trips to the United States—we came back to the subject.

In 1910 the School came at last into being. In the 20 years since then it has proved its high worth as an institution contributing vitally to the daily needs and creative up-building of the Philippines. From the start it succeeded in getting able young men from the High Schools, and it has turned out a large number of well-trained, capable men. In its product, the School has been a credit to its founders and its guiding officials.

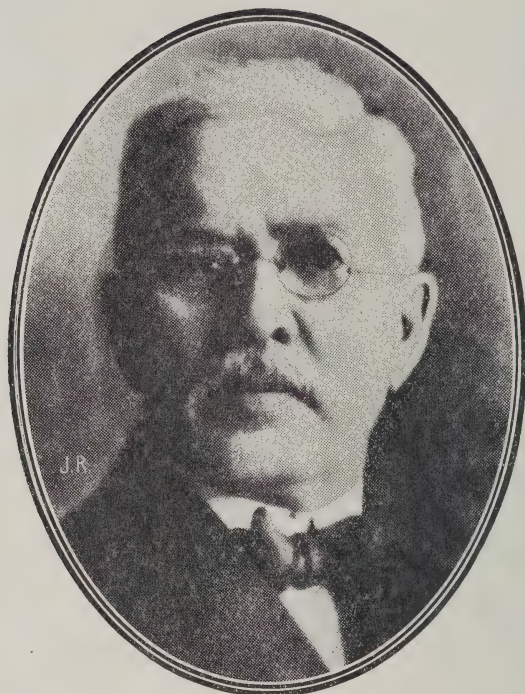
Underlying the founding of the School was the basic idea of entrusting the forest future of the Philippines to Filipinos themselves. This

policy has been fully justified. Public forestry involves not merely technique, but also day to day dealing with people. The public forests have a vital relation to the communities dependent on them. The success of the Philippine Bureau of Forestry has proved that it was wise to put both its forest technique and its human relations more and more into the hands of Filipinos trained to those tasks.

What has always appealed to me most in the Philippine Service, however, has been the spirit of public service which its men have exemplified. Nowhere is that spirit more needed than in Forestry. It is my prediction that it will be even more greatly needed in the Philippines as time goes on. There will be more and more pressure for relaxation of cutting restrictions, as the world timber shortage becomes marked. I believe the Philippine foresters will meet this challenge and successfully resist this pressure. I believe they will hold to their ideals of public service through perpetuating the splendid forests of the Philippines.

On this 20th anniversary of the School of Forestry, I send warm greetings to the faculty, students, and alumni, and my full faith in their continued devoted service to their land and people.

(Sgd.) GIFFORD PINCHOT.



MAJOR GEORGE P. AHERN

First Director of the Philippine Bureau of Forestry

1851 Columbia Road, N. W.
Washington, D. C.
April 25, 1930.

Forester Carlos Sulit
Acting-Chief, Division of Forest Investigation
Bureau of Forestry
Agricultural College
Laguna, Philippine Islands

Dear Sulit:

Your very kind invitation to contribute a few words to the Makiling Echo as a part of the issue celebrating the twentieth anniversary of the founding of the Forest School is received and accepted with much pleasure. May I also note from a flood of memories which your invitation awakens the happenings of the early days of our forest work in the Islands, preceeding the establishment of the School on April 14, 1910. I received instructions from the Military Governor in the Islands to reorganize the Bureau of Forestry that for thirty-five years had functioned under the Spanish administration.

It was indeed a difficult and complicated task to accomplish without a trained personnel. The Spanish forest officers had departed from the Islands. A few Filipino forest rangers of minor grade, a Filipino botanist and two former clerks, nine employes in all, were put to work collecting former laws, regulations, records, forms, etc. These were studied and translated and as far as practicable made a part of the new administration.

The Spanish forest policy in the Islands had been to give all positions of importance in forest work to Spaniards, leaving for Filipinos only positions of minor importance.

A few Filipino Forest Rangers entered the new service and as the number grew the organization covered more territory. Six foresters from the United States entered the Philippine Service in 1901. The efforts of this small force of foresters and rangers were concentrated on reconnaissance work in order to learn something of the forest resources of the Islands. Accessible forest areas were studied and mapped, and log and botanical collections were brought to Manila. The information gathered indicated an enormous forest wealth. A very large number of tree species added to our difficulties, but since about twenty tree species constituted 80% of the stand, our first efforts were devoted to studying the properties and possible uses of these abundant woods. Two cabinet makers were brought from the United States in 1902, and a workshop established in the old Arroceros market the following year. A timber testing laboratory was established at this time and an elaborate series

of tests made. This information with a large attractive display of the abundant woods carrying useful data as to stand and distribution soon attracted the attention of engineers, contractors and lumbermen. Almost all of the abundant woods had up to that time been either unknown or unpopular in the local and world markets.

Working plans of a number of accessible forest areas were provided for investors interested in operating large forest tracts with modern equipment. Timber concessions were granted not only to Filipinos and Americans, but to British, Chinese and other applicants. The foreign operators with agencies in different parts of the world soon provided wood markets that have widened and are now found in some eighteen foreign countries.

During the first few years activities of insurgents were widespread, transportation was very scanty and uncertain. In spite of all difficulties and dangers, involving loss of life, the forest officers went about their tasks with enthusiasm. It took courage, vision and a pioneer spirit to carry out the tasks assigned to them. How well they performed these tasks we now know.

For ten years I had been looking forward to the time when young Filipinos with sufficient school training could be found to undertake forestry training. Ten years association in the field and office with such men as Rafael Medina, Nable Jose, Diaz, Danao, Mariano and later with Tamesis, Cenabre, Peñas, Tabat and others convinced me that such material given proper technical training would provide a forest force equal to any in the world. And in the office such capable men as Vicente Ramos, Asperilla and others added to my determination to train a native force that could take over eventually not only the training of forest officers but the entire administration of the forest service as well.

Correspondence with foreign countries furnished information concerning forest schools and their methods. Dr. Whitford was sent by me to look into the forest training of natives in neighboring countries. With this information and with the cordial cooperation of the Filipino leaders, notably Manuel Quezon and Jaime De Veyra, legislation was enacted establishing the Forest School at Los Baños in 1910. A two year course provided the training of two classes of twenty-three students each. The graduates were by law made eligible for the Forest Service without further examination.

As the Philippine College of Agriculture provided a number of the courses needed in elementary forestry training it was deemed advisable to begin the school work in conjunction with the work of the College of Agriculture then located at Los Baños at the foot of Mount Makiling.

In an effort to locate the site for housing the new students I was obliged to climb a tree in order to look over the ground then covered by tall kogon grass.

Students were carefully selected from candidates who had completed at least second year high school work. Foresters Whitford, Matthews, Curran and Nash had much to do with the inauguration of the first forestry training in the school. Dr. Foxworthy came later to add his brilliant attainments to the work.

May I note at this time a sentence or two of my address to the graduates of the class of 1913, the second class to graduate at the school.

"Ever since the organization of the Bureau of 1900 it has been my dream to see a well established school of forestry turning out trained additions to the force of forest officers. The school is here and is as permanent a part as any in our Forest Service. The legislature has indicated its desire to support this service and keep pace with the development of our forest resources."

I notified the graduates that they would be given service in provinces other than where they were raised, but later would be returned to the home province to assist in educating their own people in forest conservation.

A policy was adopted of selecting students pro-rata from all provinces. Monthly reports from the school indicated to me the progress of each student. Students excelling in certain lines were given an opportunity as far as practicable to pursue work in which they showed special aptitude, such as work in the wood expert's office, the map room or the field. The medalist on graduation was allowed to select his line of work.

It was indeed gratifying to see such an early display of zeal and talent and a genuine interest in forest conservation. In 1912, noting the trend of road and railway construction towards Los Baños, I undertook to obtain a forest reserve on Mount Makiling as a demonstration ground for the school. It was secured, but not without difficulties and in spite of the opposition of high civil and military officials. Objection was made by these officials to my throwing the decision as to title to the land desired for the school into the Supreme Court. This course I insisted upon, and the school thereby secured through a Supreme Court decision title to as fine a demonstration ground as is found at any forest school in the world today.

The Forest School even after twenty years has merely made a beginning in the work of training forest officers. Many new and complicated problems must be faced and solved not only in education, but in silviculture and in administration.

Foresters in the Islands must adopt a policy of mastery and not of drift as is the case in the United States. Here in this country the lumber interests apparently control our forest policies. Here forest devastation is the heart of the forest problem and continues unchecked. Constant vigilance and courage on your part in the Philippines may save your great forest wealth.



*First Student Body of the College of Agriculture and the School of Forestry
(1910-1911)*

Woods operators will not voluntarily practice forest conservation. They will advance plausible arguments for destructive logging practices. They destroyed millions of forested acres in the Lake States and elsewhere with the plea that they were getting the land ready for agriculture. Millions of acres devastated twenty or more years ago remain as wasteland. Check such practices now before it is too late. Tales of forest devastation in certain provinces in the Islands have reached this country. Failure to grapple with this problem threatens the usefulness of the profession. A high type of courage will be required and that I know the Filipinos possess. No finer service can be rendered to your country than the conservation of this great natural resource.

I feel towards the Forest School as a father towards a son who has about reached his majority and is about to assume a man's work and a man's responsibility. And as a last fatherly injunction to you as you go about your work, be true to yourselves, have the courage of your convictions, and ever maintain the country's interest above private interest.

With best wishes for your continued success in imparting forestry education and the upbuilding of character and with the hope that your graduates will become more and more a force for good in your country.

Ever sincerely your friend,

(Sgd.) GEORGE P. AHERN.



Forestry Campus



FLORENCIO TAMESIS
Assistant Director, Bureau of Forestry

SIGNIFICANCE OF THE TWENTIETH ANNIVERSARY OF THE PHILIPPINE FOREST SCHOOL

HENRY S. GRAVES

The celebration of the twentieth anniversary of the establishment of the Philippine Forest School marks an important epoch in the history of forestry in the Islands. The success of forestry in any country depends on the leaders and also on the character of the many men who are charged with carrying on the diversified activities involved in managing the forests on the ground. The Philippine Government has had the task of introducing a new principle of public land management and also the task of building up a corps of trained men competent to apply this principle in actual practice.

The Philippine nation has been fortunate in the fact that the bulk of the forest lands are still publicly owned. Forestry is largely a public undertaking. The problem is enormously simplified in contrast to that of the United States where over three quarters of the forest land is in private ownership. In America the public land policy for over a century was directed to disposal of the land to private individuals. The idea of individual rights of property, and the use of land and other resources for private exploitation without reference to public welfare became very deeply rooted in the minds of the people. The establishment of the national forests was brought about only in the face of a bitter struggle with the sentiment that all resources should be open to private development. The introduction of forestry methods on the public forests was contested at every point and the very

right of the Government to regulate the grazing on the public forests had to be settled in the courts. Fortunately the new point of view prevailed and the procedures of the Forest Service have been accepted and have proved successful.

The problem of forest education in the Philippines has been correspondingly simplified. The objective of the school is first of all to prepare men for the Government service. The object of the training is clear cut. The school has the problem of fitting its educational plan with the needs of the Bureau of Forestry. If I interpret the prevailing conditions correctly, the needs of private employment in the Philippines call for a type of training generally similar to that required for the Government work.

Very wisely the Government has recognized that a considerable part of the work in the management of the public forests will be carried on by men who do not need an education of collegiate grade. Hence the organization of the Ranger School. It is essential, however, that there be men qualified by technical knowledge and training to handle the responsible work of general administration, the exacting problems of working plans, timber appraisals, the business of sales of forest products, the supervision of personnel, and also the work of scientific research.

The Philippine forester must build up a system of forestry adapted to the peculiar conditions in the Islands. The people of the country must be

educated to the need and meaning of forest conservation and the necessity for a permanent and consistent policy reaching forward through the years. The Philippine forester must be not only a good technician but a creative thinker and oftentimes a teacher of the general public. He is engaged in a new enterprise developing new policies and methods without precedents which he can follow. In his public work he is ever a leader. He must command respect not only through his personal integrity and character, but also through his acknowledged mastery of his task.

These are some of the considerations in providing an education of high order for those who are to be in charge of the public forestry work of the Philippines. Upon their shoulders will rest the destiny of the land interests of a large part of the Islands. Anyone familiar with the exacting duties of the forester in a responsible position must perceive that the work calls for men who have both a knowledge of technical procedures and a sound basic education as well. The student sometimes chafes at the necessity to study various fundamental sciences and other subjects. They are required for a purpose. Without them the forester will sooner or later find himself handicapped. He will see the better prepared man pass him and occupy the more responsible place.

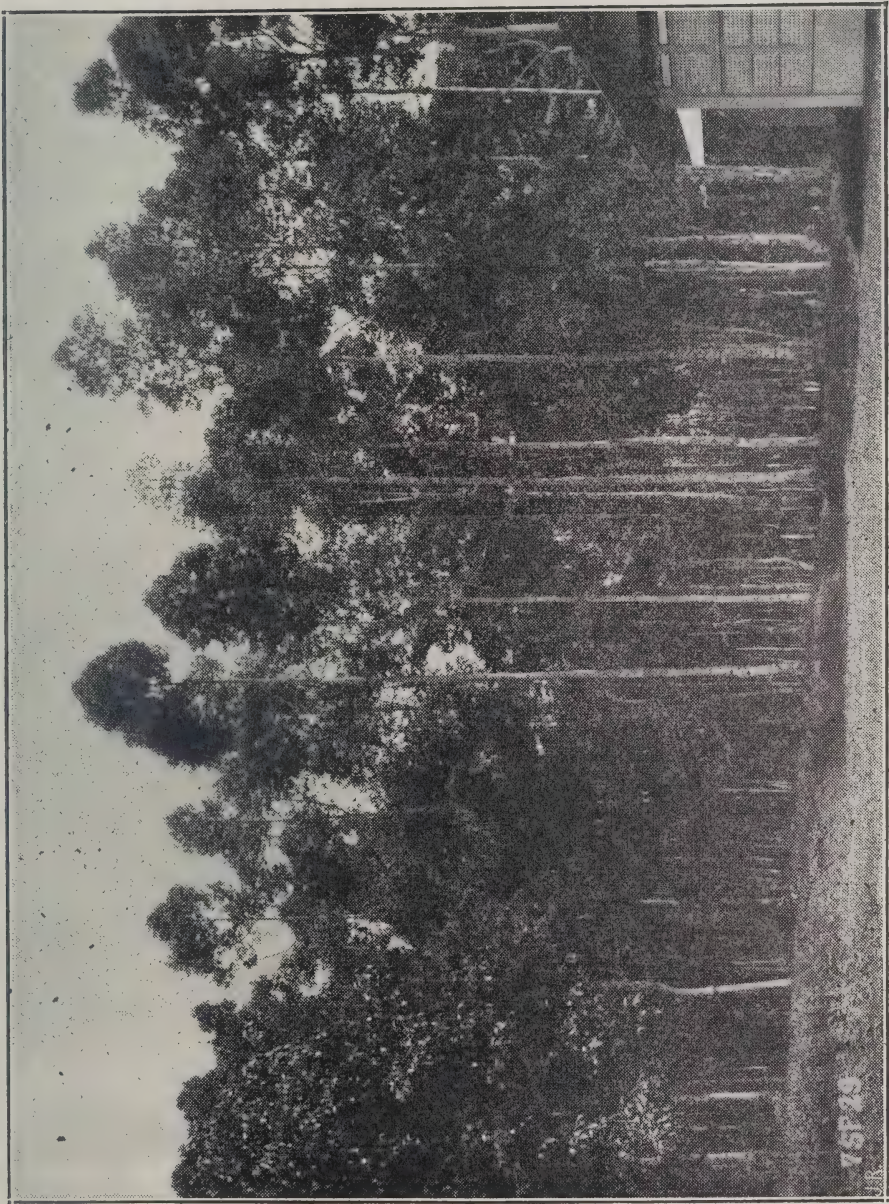
One of the most important essentials of forest education is to give to the student the right point of view toward his task. We often speak of the ideals of forestry. We must not only handle the present problems that come to us day by day. We must provide for the future. We cannot introduce at once the best methods of silviculture. It is a progressive pro-

cess. It will be successful only if the forester makes each step count toward an ultimate goal which he can clearly see. The routine man will always occupy a routine position. It is the man of imagination, of initiative, of the courage of his convictions, who will be the leader. Hence the school seeks not merely to train men in the technique of forestry but also to develop their powers of observation, ability to think clearly, and to express themselves forcefully.

The greatest thing that a student can do is learn to use his own talents to the greatest possible degree of effectiveness. Everyone is limited by his natural endowments. The man of unusual ability has a distinct advantage. But the most effective work is frequently done by those, less brilliant perhaps, who by their persistence, thoroughness, self reliance and courage make the best use of the talents they possess.

One of the greatest tests of a forester is his ability to accept responsibility. He must face new situations constantly. He must make decisions that may have a far reaching effect. He may have rules and procedures laid out for him in public service. But he must be able to interpret these to meet new situations and do this in light of the basic policies and spirit of the Bureau of Forestry.

The time may come when the work and principles of the public enterprise will be challenged, just as has been the case with public forestry in most countries within the earlier periods of their history. This may come from a sincere criticism or it may develop from those seeking selfish political or speculative advantages. Then will come the test for the foresters to demonstrate the soundness of the public enterprise. Upon their strength



Bagtikan Plantation—School of Forestry

and ability will depend the safeguarding of a system that in the long run will mean so much to the economic and social well-being of the Philippine nation.

I have been associated with a number of men who have come to the United States for advanced study. The ability, good judgment, and splendid personal qualities of these representatives of the Philippine people have left a deep impression upon me. Their work and spirit of public service have given me an abiding faith in the future of forestry in the Islands.

I congratulate the School of Forestry upon the occasion of its twentieth anniversary celebration. It has been laying human foundations of an enduring character, necessary to solve a human problem of capital importance to the nation. I wish that I could be present to see the group of men who have been pioneering in Philippine forestry. They little realize the far reaching effect of the work they have been doing. Future generations who will benefit from their work will rise to look upon their courageous and far sighted efforts with deep gratitude.



HAROLD CUZNER
Forester In Charge, School of Forestry

A MESSAGE FROM PROF. R. C. BRYANT

(Former Assistant Director of the Philippine Bureau of Forestry)

The celebration of the 20th anniversary of the foundation of this School marks an important milestone in the progress of forestry in the Philippines. Conceived and established to meet an urgent need for trained men for the administration of the public forests in the Islands, its graduates have been a most important factor in building up what is recognized as one of the most efficient forest departments in the tropical regions of the world.

Few of those who have entered the service of the Bureau of Forestry in recent years can realize the changes which have been brought about in the administration of the Insular forests since 1898. There are now many men in the Bureau who have been trained either in this School or the forest schools abroad, while from 1898 to the latter part of 1901 there were none. The entire work during the latter period was in charge of men whose only knowledge of the forest was empirical. But little was known about the actual extent of the forest area, its composition and the volume of merchantable raw wood which it contained. Utilization was based on a few species which, because of figure, color, durability or other special qualities was in demand in the local or foreign markets. Modern logging and milling practice had not been developed and large consumers of lumber often imported Douglas fir and other exotic woods to meet their needs.

A preliminary examination of the forests showed that much of the timber wealth of the Islands was repre-

sented by a group of woods, the dipterocarps, for which there was only a very limited demand. However, they were admirably adapted for a general purpose wood and could be logged at a reasonable cost, because of the relatively heavy stand per acre, provided modern equipment was available.

Private capital is slow to initiate new projects, especially in a country which has not yet begun to develop commercially on a large scale, and it early became apparent that an extensive market for dipterocarp lumber would not be available unless the Government took a leading part in its promotion.

The Islands owe much to Major George P. Ahern, the first chief of the Bureau, who early foresaw the need for energetic action and who took steps to acquire and disseminate data concerning the forest resources. The establishment of a timber testing laboratory and a wood-working shop by him during the early part of 1902 was a very powerful factor in the early development of the lumber trade, for the laboratory provided, for the first time, authentic data concerning the physical and mechanical properties of many valuable, but little known woods, and the wood-working shop showed the wonderful possibilities which many of the woods possessed for commercial purposes.

The work of the Bureau suffered during the early years because of a lack of a trained personnel. The reconnaissance crews, with the exception of the man in charge, were composed of local laborers who had no

knowledge of the work and often were not familiar even with the names of the trees. The field men, surrounded by a strange flora, were hard pressed to classify the trees so that the field data would be usable. Little was known, botanically, about the forest trees and the local names, varying by locality, often were the only means of identification. The writer recalls with interest an attempt he made to train Negritos as calipermen for a reconnaissance crew in an effort to capitalize their agility and their intimate knowledge of local flora. The impossibility of teaching them to read caliper numbers correctly led to the abandonment of the idea, the men being retained, however, to identify the trees.

Early timber cruising work also presented other difficulties because of the lack of transportation and the necessity of taking into the forest all food supplies needed, because only at occasional intervals was it possible to secure game in the forest or other food at nearby barrios. When possible, hunters were employed to provide the camp with meat. On one occasion during the early part of 1902, the writer's party lived on rice and honey for two weeks, outside food supplies being cut off by a cholera quarantine.

The Bureau also was handicapped in its inspection work because many of the rangers were not well posted on wood identification and errors sometimes resulted in the classification of timbers. Monteros also were sometimes more zealous than diplomatic in the enforcement of the regulations as may be shown by one case where payment was required on a small cargo of sand destined for glass manufacture, on the basis that it came from a public forest and,

therefore, should pay a royalty as a forest product.

During the first few years a strong effort was made to improve the forest development work including the technique of granting timber licenses and the inspection of cutting areas. The pressure for the issuance of licenses was strong and an attempt was made to confine them to responsible parties, who conducted their logging operations in a satisfactory manner. Only a crude form of silviculture could be attempted because the Bureau lacked an adequate trained personnel competent to study this aspect of management and to outline a proper procedure.

It was early realized that without a greater force of technical men, an adequate system of handling the forests could not be developed and it was apparent that the only logical method for building up such a technical staff was to train young men who were residents of the Islands, in forestry. The only way this could be done was to establish a ranger school whose graduates could be absorbed by the Bureau. This was finally accomplished in 1910, when the first forest school in the Islands was established. The wisdom of this action is best expressed by the records of its graduates in the Government Forest Service, and by the great advance which forestry has made since that time. Much credit for the marked progress which forestry in the Philippines has made in recent years, is due to the present Director, Arthur F. Fischer, for success in any great project demands a wise and efficient administrative head.

The period of usefulness of the School has only begun, for more intensive forestry practice will be de-

manded in the future and the task of developing and administering the forest policy of the future will rest largely in the hands of the graduates of this School.

As one of the pioneer foresters of the Bureau who still retains the keenest interest in all of its activities, I wish on this, the 20th anniversary

of the foundation of the School, to congratulate Director Fischer, the Faculty and graduates on the remarkable progress which has been made in forestry education during the last two decades and to extend to all my best wishes for the future which, judging from past attainments, I know will be bright.

RALPH C. BRYANT

*Manufacturers' Association Professor of Lumbering
Yale University*

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HON. JAIME C. DE VEYRA
(Author of the Law Creating the School of Forestry)

A MESSAGE

It is with a real and personal pleasure that I dedicate to you this message on the occasion of the Twentieth Anniversary of the founding of this School of Forestry. For the personal part I had in the establishment of this school I feel amply repaid by the steady progress, service rendered and increasing recognition of its importance which has characterized its twenty full years of life. It was my hope that the founding of a school of forestry would fill a long felt need in our vocational education field and its success has vindicated my faith and realized to a great extent the hope with which I was spurred to advocate its creation.

Twenty years have passed—twenty years that saw fresh graduates fare forth into that vast, untried, untamed, uninviting nay, almost unknown but needy field of forestry, and turn their subsequent years into monuments of accomplishment. The field of forestry calls for more than the ordinary individual can give and of the many needed and called for, few are chosen. Not all can be forest rangers, for few can undertake and carry on the arduous and dangerous life that is your calling, few can face the loneliness, discomfort and personal danger, few can give the service that the forest ranger must render. Their self effacing heroism in a life that calls for supreme physical hardihood, dogged perseverance and conscientious

labor as they play their lone hands in the most impressive but most solitary of occupations rises like a silver beacon out of the darkness of present day selfishness, greed and dishonesty.

And so, slowly but surely, these pioneers toiled on till now twenty years later we find following upon their steps a growing army of skilled forest rangers whose unobtrusive but painstaking labors in forest conservation and inspection are now reflected everywhere in this new era of Philippine progress, wherever trees grow—and in the tender saplings that mark the rise of the forests of to-morrow.

Consequently I feel certain that all who are partaking in this celebration are actuated not only by feelings of pride of accomplishment, but also of respect and tribute to the old graduates who have already served so heroically and so well. You thus have a great legacy of example, experience and self-sacrifice and I am sure you will add greater lustre to the brilliant record made by those who have gone before. Therefore, I join you in your rightful joy and pride on this occasion and express the conviction that you too will swell the sturdy ranks of your predecessors in their quiet battle of greater service and accomplishment for the country that you love.

JAIME C. DE VEYRA.

A MESSAGE

Our country is so richly endowed by nature that we have become lavish, indeed extravagant, in the use of our natural resources. In no instance are we more wasteful in our practices than in the disposition of our forest resources.

The Government does well in enforcing strict regulations in regard to the use of our forest resources and in employing men to guard our forests, for already the need for reforestation is felt in many parts of the Philippines.

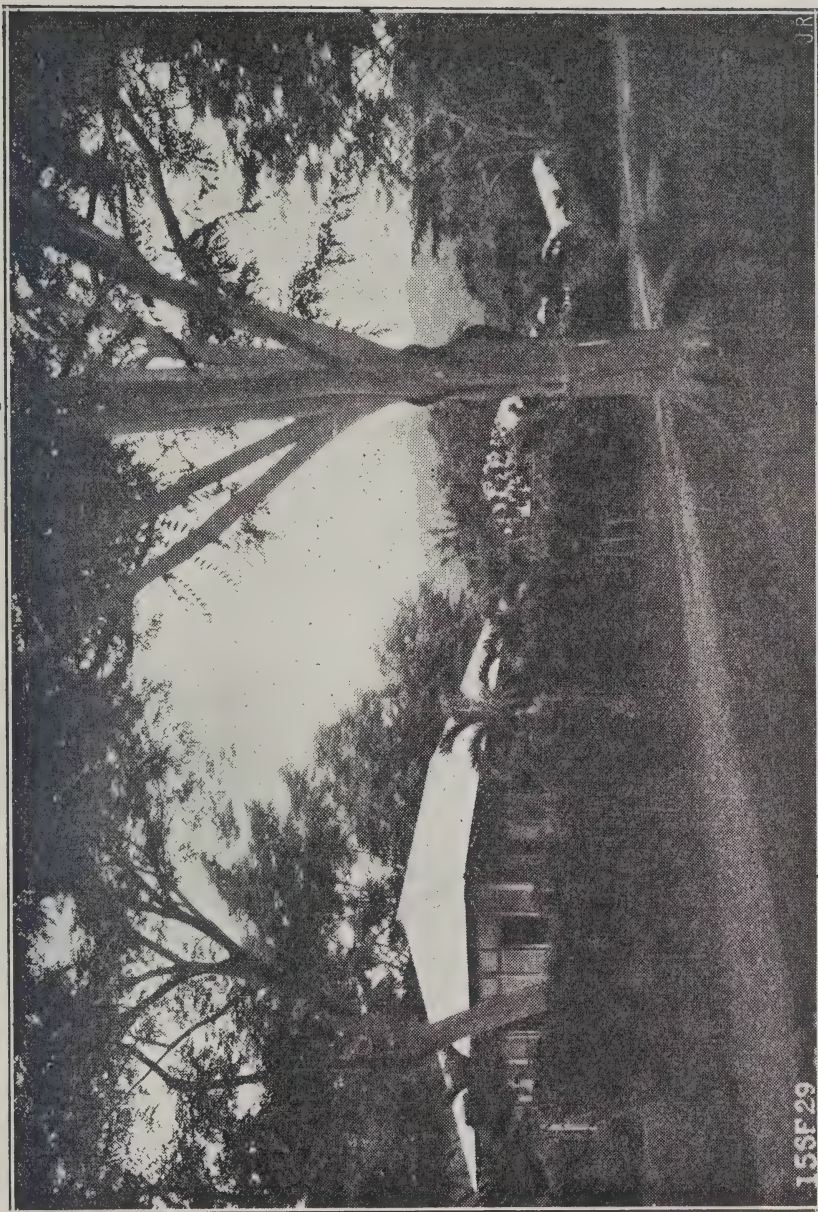
The province of Bukidnon, for instance, presents the sad spectacle of possessing a vast territory and yet not having enough trees for fuel for the scant population that inhabit the settlements along the road.

All far-seeing citizens commend the work of the Bureau of Forestry and the zeal of its men in protecting our forests from complete destruction and taking such measures as would rehabilitate our forests for the use of future generations.

JOSE G. SANVICTORES

Representative for Agusan-Bukidnon

Malaybalay, June 5, 1930



158F29

JR

Present Student Quarters—School of Forestry

April 21, 1930.

Mr. Carlos Sulit,
Acting-Chief, Division of Forest Investigation,
Agricultural College, Laguna, P. I.

Dear Mr. Sulit:

It is very kind of you, in your letter of February 3, to give me this opportunity of adding my word to the congratulations and good wishes you will receive from all sides on the celebration planned to mark the twentieth anniversary of the founding of the Forest School. To all who will be so fortunate as to be present must come the pleasure of seeing the success of an institution which has already meant so much, and in the future can not fail to mean still more, to the safeguarding and utilization of one of the most important heritages of the Filipino people; and of realizing during the ceremonies planned for the occasion, and by personal contact with the officers of the Bureau of Forestry and with the faculty, alumni and students of the School, that the welfare of the present and future generations is intelligently and unselfishly served. For the School has always stood, and I am sure will always stand, no less for the highest ideals of public service than for the technical instruction its students receive.

To all foresters, therefore, and to all your associates and fellow countrymen, the occasion must be memorable: but one's thoughts are led irresistibly to those pioneers in forestry in the Philippines to whom from the earliest days such a school was an ideal dreamt of but seemingly impossible of attainment, but who by their own ideals and courage and persistence converted a seeming impossibility into living actuality and set the standards to which the School so largely owes its success. I hope that most if not all of them will find it possible to be with you in person for, pleasant as the occasion will be to all who attend, surely for them is reserved the greatest pleasure and satisfaction of all; and it is to them, present or absent, that I beg to send my most sincere congratulations.

With very best wishes, Believe me,

Most sincerely,

(Sgd.) FORSYTHE SHERFESEE

Address:

Care National City Bank of New York,
41 Boulevard Haussmann,
Paris, France.



Forestry Students Working in the School Nursery

GREETINGS FROM MR. R. B. WEAVER

I certainly would like to be present at the 20th anniversary of the Founding of the School of Forestry. Since I left the School, I have noticed that many of the graduates have gone back to the Forestry School at New Haven and have become alumni, together with myself, of Yale. I hope the anniversary cere-

monies are a success and that each year, the School will become more and more of an influence in the spread of Forestry and Conservation of the Natural Resources of the Philippines.

ROSCOE B. WEAVER.

The Pennsylvania State Forest School Mont Alto, Pa.

A WORD OF GREETING

As a former member of the Faculty of the School of Forestry, University of the Philippines, and Forester in Charge of it from 1920 until 1926, it gives me great pleasure to send a word of greeting to the personnel of the School, faculty, alumni and students, on this its twentieth anniversary. I shall always remember the pleasant associations that were mine during my stay in the Islands and particularly the hearty cooperation that I received from those with whom I came in contact. It was during my incumbency as Forester in Charge that the Degree course was inaugurated and I always felt that this was a most progressive step in forest education in the Philippines.

The School is particularly fortunate in having on its faculty two of the pioneers of the Forestry move-

ment in the Islands: Mr. E. E. Schneider and Mr. H. M. Curran, as well as those who have served conscientiously and ably during the past ten or more years: Foresters Sulit and Racelis, and Rangers Mamerto Sulit and F. Salvosa, in addition to those members of the Manila office who give part of their time to instruction work.

This year marks my seventeenth in giving instruction in Forestry, six at Ohio State University, one in my present position and ten years in the Philippines, and the School there will always have a warm place in my heart so on this twentieth anniversary I desire to extend my best wishes for its future development and success.

O. W. PFLUEGER.

TERRITORY OF HAWAII
BOARD OF COMISSIONERS OF AGRICULTURE AND FORESTRY

P. O. Box 451
Telephone 2 White 351

Wailuku, Maui
April 14, 1930.

Mr. Carlos Sulit, Forester,
School of Forestry,
Agricultural College,
Laguna, P. I.

Dear Sulit:

I read your letter telling of the coming celebration of the 20th anniversary of the School of Forestry with much interest and a feeling of homesickness to be back among the men with whom I worked so long and pleasantly.

It is hard to realize that the School, which I first knew as a struggling infant housed in bamboo shacks, has reached its 20th birthday, with its own modern quarters and equipment and a long list of graduates to speak for its success and to testify to the vision and work of the men who were responsible for its founding and for bringing it to its present position.

For while I had no direct connection with the work of the School, I had ten years of work and association with its graduates and I feel confident in saying that no School ever turned out a finer type of men or did and must continue to do more for the fundamental benefit of the Philippines than the School of Forestry. When it produces men who can, without a whimper, face death in preference to giving up an active useful life for one of inaction and dependence or, without protest, face the ever-present threat of attack by a man-eating tiger with its snarl and the scream of a victim ringing in their ears—(page Valderrama and his table knife)—in order to carry on their work, the School has nothing to fear for its work or its success.

I wish with all my heart that I could be with you in Los Baños to help celebrate next June and to meet my old friends of the School and Bureau of Forestry, but as too many miles seem to separate us just now, I sent my heartiest greetings and good wishes for the future growth and good work of the School.

Sincerely yours,

(Sgd.) WILLIAM CROSBY.

A RADIO-TELEGRAM

From Mr. ROY NASH

Royal Freeman Nash, an American Forester, came to the Philippine Islands in 1910 and was engaged for the Philippine Forest Service. He was later designated by Major George P. Ahern, then the Director of the Philippine Bureau of Forestry, to be the Secretary of the Forest School. Owing to Mr. Nash's energy and acumen and the cooperation of his colleagues, the school, which had started in a modest way, became one of the most progressive and up-to-date undergraduate forest schools in the world.

On the occasion of the 20th Anniversary of the School of Forestry, Mr. Nash sent to Dean Fischer the following radio-telegram from New York greeting the Faculty, the Alumni and the Students of the School of Forestry:

169 KKL FR

WESTERLYRI 31 11TH 426 P

NLT FISCHER FORESTRY

MANILA

HOPED UNTIL LAST TO COME MY THOUGHTS ARE ON
MAKILING WARMEST GREETINGS TO MY FORMER STU-
DENTS AND COLLEAGUES MY CONGRATULATIONS ON
ACCOMPLISHMENTS OF TWENTY YEARS

ROY NASH.

Cadwallader, Gibson Lumber Co.

MANILA, P. I.

*(Member, Philippine Hardwood Export
Association)*

The Makiling Echo

*Published Quarterly by the Division of Forest Investigation,
Bureau of Forestry—Agricultural College,
Laguna, P. I.*

Volume IX

JULY, 1930

Number 3

Editorial

On June 14-15, 1930, we are to celebrate fittingly the 20th anniversary of the founding of the School of Forestry, a school of the University of the Philippines established in the early part of the American administration in the Philippine Islands to serve as a training place for men to carry on the routine work of administering the forests of the Archipelago. One of the problems confronting the Forest Service at the beginning was the lack of competent men to carry on the work. The United States was looked upon as a possible source, but owing to the limited enrollment at that time in the American Forest Schools, this was found impracticable. A plan was suggested of securing men from India and Java, but legal impediments in the Civil Service regulations made this impossible. The establishment of a local Forestry School was therefore the natural solution and its realization was mainly due to the foresightedness of the first Director of Forestry, Major George P. Ahern and of Governor Gifford Pinchot, former Chief of the U. S. Forest Service and at one time connected with the Philippine Bureau of Forestry in an advisory capacity. It remained for the Honorable Jaime C. Veyra to introduce the bill which was passed by the Philippine Legislature in April, 1910, authorizing the Director of Forestry to appoint Forest Pensionados and to construct temporary buildings for their use. This marked the beginning of the Forestry School, which was first opened to students in June, 1910, as a branch of the College of Agriculture. In 1916, Act No. 2578 was passed, creating the School of Forestry a separate School in the University.

During its twenty years' existence the Forestry School has more than justified its establishment. It has turned out 435 graduates, many of whom are now holding responsible positions

not only in the government service, but also in lumber companies. The Assistant Director, most of the Division Chiefs and all District Foresters and Officers in charge of Forest Stations of the Philippine Bureau of Forestry are Alumni of the School. Several are holders of Forestry degrees from Universities in the United States. Graduates can be found making a success in nearly all walks of life. Some are in lumber companies, holding responsible positions, such as logging superintendents, foremen, lumber graders and contractors. Some are in other government bureaus and in the Army while others are practicing attorneys, timber licensees, farmers and business men. The School of Forestry thru its graduates is playing an important part in disseminating forestry principles, not only in the Philippines, but also in other countries. In Borneo, the Forest Service is composed principally of graduates of the Philippine Forestry School. Two graduates from Guam and ten graduates from China are the School contribution to Forestry practice in those countries. Recently the governments of Hongkong and of Madras, India, have sent students to take short courses in the School. In addition, the School has been visited by prominent Forestry men of Japan, Java, Burma and India.

Since the first graduation in 1912, 22 have died, most of the deaths being the result of sickness incurred in connection with their hazardous and strenuous official duties in the Bureau of Forestry.

During the last two decades, much has been accomplished, but more remains to be done if it is desired that the Forest School should keep pace with the progress of Forestry and Lumbering in the Philippines. During the early years, instruction was given mostly by members of the Bureau of Forestry, but owing to lack of men, not enough instructors could be detailed to give the necessary training. For several years the course leading to the degree of Bachelor of Science in Forestry has been authorized, but this has not been formally inaugurated owing to lack of personnel and laboratory facilities. The School has an excellent Demonstration Forest in the Makiling National Botanic Garden, but is unable to do any real Forestry work there owing to lack of men and funds. The pioneer teachers of the School have left a good record behind them, but too often at the cost of sacrificing other work as well as their personal interests. Other problems confronting the School at present are to attract

the right kind of men to take up the profession of Forestry and assuring them of the prospect of stable and remunerative positions after they will have graduated. The first problem lies mostly on the shoulders of the alumni, for they, more than any other group of men, are in a position, by their exemplary conduct, education of the public and direct contact with High School students, to encourage desirable men to enter the School. The second problem depends on the government, which should see to it that the salaries of men in the Bureau of Forestry, at present the only entity employing nearly all the School of Forestry graduates, are put on the same scale as employees in other government bureaus of equal standing. It is true that the lumber industry is beginning to absorb some of the graduates, but its demand is more for the more experienced rather than for the newly graduated rangers.

If it is desired to keep up and maintain the high standard and the valuable services which the Forest School is rendering the country, more liberal support in the form of men, funds and facilities must be given the School of Forestry; the alumni should encourage desirable men to take up the profession and the government should provide for the graduates of the School stable and remunerative positions.

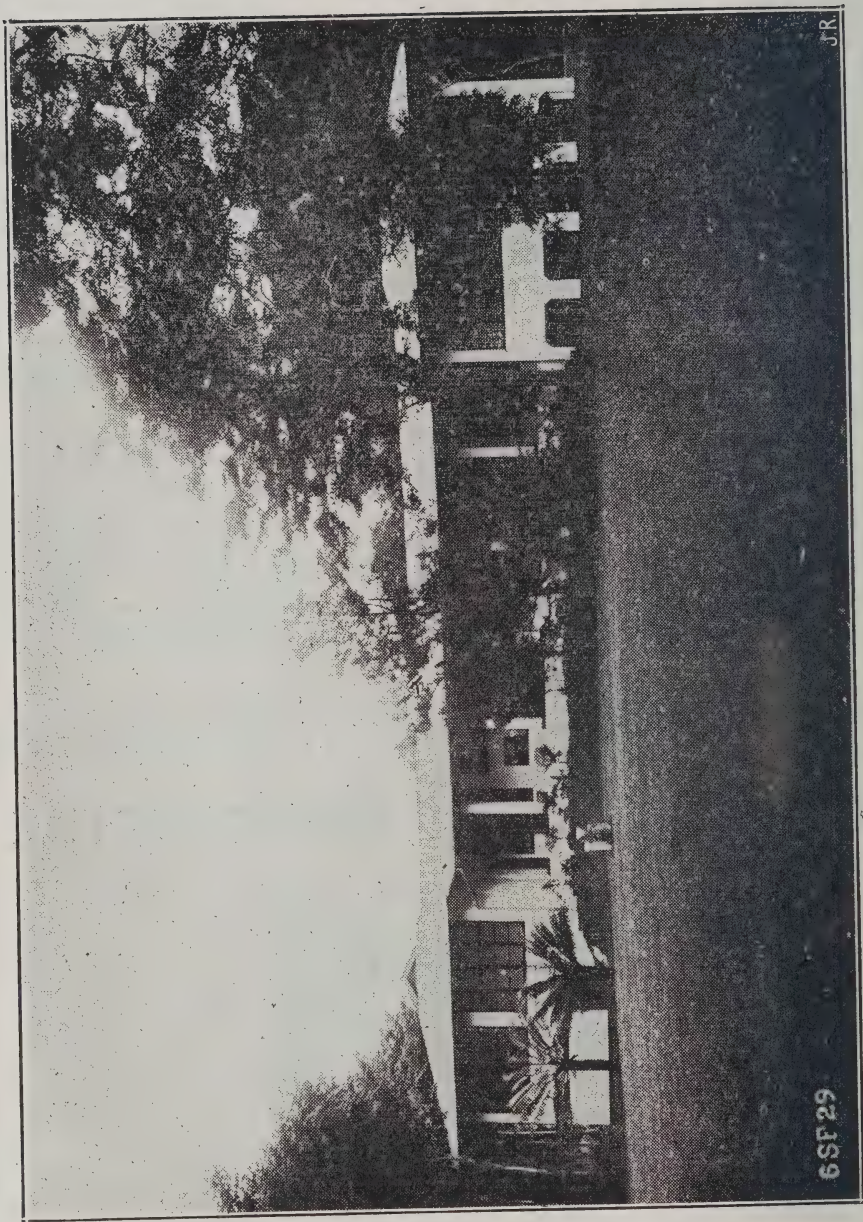
Molawin Hall Restaurant

Agricultural College, Laguna



Where most of the students of the
College of Agriculture Board

Run by the College of Agriculture



6SF29

Division of Forest Investigation Building

JR

A RETROSPECT

By H. M. CURRAN

The progress of forestry in the Philippine Islands, if judged only by the growth of the School of Forestry at Los Baños, is something of which the profession may be proud.

The public can hardly appreciate the tremendous efforts put forward by those of authority in the Islands to safeguard the Islands' wealth for those now living and for coming generations. The public never comes in contact with the forest. Their lives are spent largely in cities, in towns, amid the fields or in the low hills which rise above the cultivated lands. Here we find no forests. Where roads and trails end, on coasts where the great steamers seldom call, over the tops of giant mountains, we find the forest wealth.

If the public is to judge the work of those who are saving and caring for this wealth, they must judge by things nearer at hand. A forest school is a place where all the good things planned for the future of the forests originate, and where those who make the plans also train the personnel to accomplish the desired work.

The world is full of schools training men for all works of life, but the good forest schools in the world could almost be enumerated on the fingers of two hands. England boasts but one, France but one outstanding school, Spain has one, and this is more or less true of all the larger countries of Europe.

Germany, a pioneer in forestry, has perhaps more schools than any other country of Europe. The United States, the youngest of the nations

to embrace forestry on a nation wide scale, has many schools.

As we slip into the tropics, where the bulk of the world's forest wealth lies, there are only three schools of importance; all are in the far east, one on the slopes of the Himalaya mountains, one in the Philippine Islands, and the third school recently established in the Federated Malay States.

They are all closely related, practically the outgrowth of English and American administration in these regions.

The Forest School in the Philippine Islands is unique in that it possesses a forest covering the slopes of Mt. Makiling which is used for demonstration work for the students of the College.

This forest is typical of the forests at medium and high elevation found in many parts of the islands, and while it has been culled for many generations, excellent stands of timber are still found over a large part of the area, and the other problems of the lower slopes, cleared for agriculture, abandoned, grown up to tall grasses, subject to annual fires, covered with climbing bamboos, or with brush, are also present, and under skillful forest management, are being solved for the benefit of the local population, and those dependent on the mountain for their forest supplies.

The school itself is located on the borders of the commercial forest, surrounded by extensive plantations which are yielding revenue and study material, and the students are daily

in the forest as well as in the class room, and their training is thoroughly practical. The men who are their instructors are men who have practiced for their whole lives, both in the government and in private employ, the profession of which they are now implanting the rudiments to the students.

It will be interesting to note the improvements in the school during the past twenty years.

As one of those early associated with the school, I can perhaps, better than most, appreciate the advances made during the past years. When it was finally decided to establish a school at Los Baños for the training of the personnel of the Bureau of Forestry, I was one of two foresters selected to look over the available sites for the first buildings. Forester Nash was the other member of the party.

The College of Agriculture under Dean Copeland occupied a few buildings to the north of Molawin creek. The Dean when asked for a site for the forest school, crossed the creek and waving his hand at the kogon and talahib covered hills, which rose above the creek stated that they had no use for that area, and the forest school would be welcomed to such part of the land as they might wish to occupy.

We climbed up the hills, wallowed through the tall grass, climbed into the parang trees, for a better view, and finally decided on the knoll, now occupied by the tennis courts and adjacent residences of college professors, as the first site of the forest school. The tall grass was cut, the parang trees saved for shade and ornament, and a group of sawali and nipa thatched buildings were erected to house the school, the instructors and students.

From this modest beginning the present day school has grown. Kogon and brush have disappeared, and were replaced by planted forests. The improved land was covered by the Dean of Agriculture and his associates who migrated in a body and built their homes about those occupied by the foresters.

Later, owing to the tremendous growth of the College of Agriculture and the College of Veterinary Science, the school of Forestry was forced to migrate up the slopes of Mt. Makiling on to the lands of the forest reserve, which was purposely set aside as a demonstration forest for the school, and also as a national botanic garden for the pleasure and profit of the Philippine people and a study area for scientists from all over the world interested in the flora and fauna of the region.

Today the school occupies handsome concrete buildings, the students are housed in pleasant cottages of wood and concrete, while the professors and instructors have attractive homes with well tended lawns set with shrubs and flowers.

A wonderful progress in twenty years in the merely physical housing of the school. During the years that have passed, hundreds of men have passed through the school, are practicing their profession in many lands, have safeguarded the island forests, turned in millions of net revenue into the Insular Treasury, have graduated from the best forest schools in the world, and as a body of men, compare favorably with the foresters of any land, showing that progress has not alone been along physical lines, but that the mental and spiritual, as marked by character and achievement, is also an outstanding feature of this forest school.



*Forestry Students Constructing a Log Bridge
(1930)*

STANDARDIZATION OF EXPORT LUMBER WHAT THE PHILIPPINE EXPORT ASSOCIATION IS DOING

By CHAS. J. HAFNER

Chief Inspector, Philippine Hardwood Export Association

During the first quarter of this year the Philippine Hardwood Export Association has trained twelve inspectors in the technique of applying the Mexican and African Mahogany inspection rules as defined under the National Hardwood Lumber Association rules of inspection, which rules have been adopted by this Association to apply to all Philippine hardwoods. In the course of this training these men have received instructions also in the standard grades which apply to American hardwoods, this being necessary in event there should from time to time be some changes made in the inspection rules as now adopted by this association to apply to Philippine woods.

In training these men this association feels it has made quite a long stride towards the standardization of grades here in the Philippines and we hope that these men who have been selected to receive such training will be instrumental in carrying out the aims of the industry, that of standard grades and uniform quality for all shipments of Philippine hardwoods to the world markets.

But in order that such standards be maintained it is necessary that the inspectors be men of the highest standards and men that the utmost faith can be placed in by their employer, for as a rule the inspector in making any shipment is more or less a free lance for the reason that his firm has faith and confidence in his ability to ship only such grade as

defined in the order and the fact that he has in his keeping the interest of three parties, should tend to keep him ever on the alert. Inspectors should always keep in mind that they are very important links in the lumber industry for the simple reason that the best sales organization possible cannot create markets for the Philippine hardwoods unless they have uniform grades to offer and that can only be made possible by having competent inspectors to ship the stock, and firms which have such staff of inspectors are as a rule not slow to appreciate their worth. The lumber industry in the Philippines offers more opportunities to the wide awake individual than any other industry in the Islands, therefore competent inspectors will always be in demand now as well as in the future. Tho it is well to remember that there are quite a few requirements which go to make a competent and dependable inspector; first, of course, is his ability to make quick and accurate decision in the course of inspection; second, his knowledge of grade values and manufacture; third, his neatness and despatch of his duties, such as tallies and cleaning up the lumber laid out and covering piles when finished; fourth, his ability to handle men and get the best results which can be best obtained with some degree of kindness towards his fellow man who has not been as fortunate as he is; fifth, his conduct towards those who may be in position to

advance him; sixth, the courage to admit when he is wrong, and never to pass the buck on the other fellow, and last but not least in having confidence in his ability in the face of strong competition.

I have the utmost faith in these men who have received their training with me and have every reason to believe that they will set a standard of ethics worthy of their profession.

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CHARACTERISTIC "FIGURE" IN PHILIPPINE CABINET WOODS

By LUIS J. REYES

Wood Technologist

Chief, Division of Forest Products

Bureau of Forestry

Manila

Wood is normally built up of cells which run parallel with the long axis of the trees and is traversed by minute tissues, the wood rays, running horizontal to it. Ordinarily therefore a piece of wood appears like a homogeneous mass except when it is cut radially through the long axis of the wood rays. Such woods are termed straight-grained.

In the tropics we have a large number of woods in which the fibrous tissue do not run parallel with the long axis of the tree. When sawn into boards, these appear less homogeneous than straight-grained ones because the fibrous tissues are cut at different angles, thus reflecting light differently.

In describing the grain of wood we employ the adjectives straight, wavy, and crossed to describe this character of alignment of the tissue in reference to the long axis of the tree. It should not be confused with the *texture* of wood, which refers to the *size* of the elements or group of elements and the width of growth rings. Fine textured woods are those possessing small pores, and coarse textured ones, those with large pores, distinctly visible to the naked eye. On the other hand, straight, interlocked and wavy grained woods are those where the fibers are *arranged* as indicated by the names.

The characteristic "grain" or alteration from normal wood in the native species may be grouped into four

main types namely, (1) those caused by an abnormal alignment of elements with reference to the longitudinal axis of the tree, such as crossed, or interlocked and wavy; (2) those caused by the concentric arrangement of pores, parenchyma and layers of wood of varying density; (3) by the presence of conspicuously large wood or pith rays such as those in oaks, katmons, *Ardisias* and others; (4) those caused by knots or knot-like structures (birdeye); (5) and by the differently colored concentric bands of wood such as those in dao, (*Dracontomelum dao*), kamagon (*Diospyros* spp.) and sangilo (*Pistacia chinensis*).

(1) *Interlocked Grained Woods.*

In the tropics crossed, or interlocked grained woods are more common than in the temperate zones. Certain woods have growth rings, which for a number of years run a bit inclined a few degrees to the left and for a similar length of time change the direction of growth to the right. These alternating spiral growths vary in pitch from a few degrees up to 12.5° in reference to the longitudinal axis of the tree, so that we find some woods with an angle of divergence of woody tissues as high as 25° . In most lauans the angle of divergence range from 6 to 16° .

The crossing of fibers in interlocked grained woods is by no means uniform even in the same board, and for this reason we get a variety of

"figure" which greatly enhances the beauty of wood.

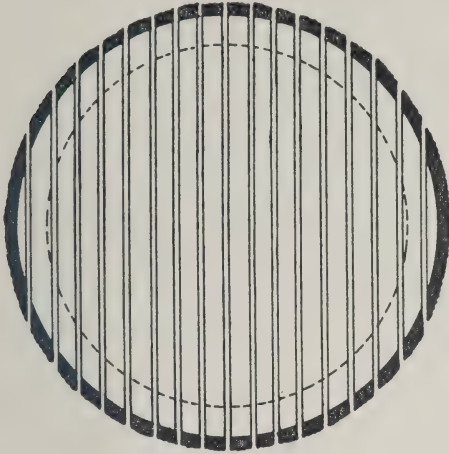


FIG. 1

A log 60 cm in diameter sawn "alive"
 $66\frac{2}{3}\%$ of the area of such log will show
 "ribbon" figure and $33\frac{1}{3}\%$ will be plain.

In sawing woods for ribbon stock, sawyers should take advantage of the interlocking of grain by cutting thru the crossing of fibers. Small logs, about 24 inches in diameter are better sawn "alive" i.e. straight thru as shown in Fig. 1. By sawing thus the percentage of "ribbon" stock is less but it permits the production of wider boards. It is for this reason that logs about two feet in diameter are more profitably sawn straight thru. When logs are larger, say, three feet or over, it is preferable to saw them up first into cants as shown in figure 2 and then cut these edge grain i.e., the saw to run more or less parallel with the wood rays, or perpendicular to the growth rings. When sawn tangent to the growth rings many cross grained wood show distinct flordid or flame figure.

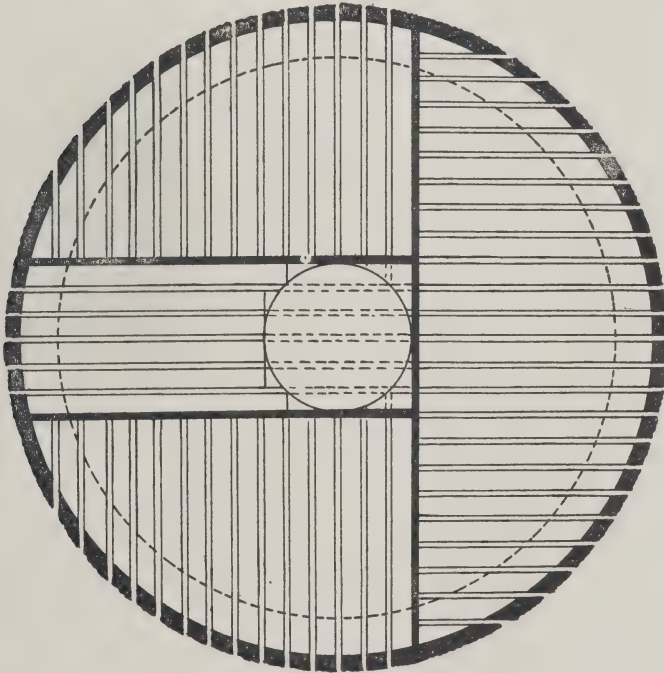


FIG. 2

A log about 30 cm. in diameter cut into cants and sawn edge grained. This is the common methods employed for sawing "ribbon" stock.

Wavy Grain

Wavy grain is common in some Philippine woods. It is common in amugis (*Koordersiodendron pinnatum*) bansalagin, (*Mimusops* spp.) and molave (*Vitex parviflora*). When viewed on the tangential side, the grain is wavy, but not conspicuous as the fibers are cut thru on the same plane, but on the radial side, it shows a conspicuous corrugated appearance as the fibers are cut at different planes. In sawing wavy grained logs, therefore, it is best to employ the same methods as suggested for interlocked or crossed grained species.

Wavy grain in woods is of different types not only in the size of corrugations but also in their regularity. For instance, in curly bansalagin (*Mimusops parviflora*) the cor-

rugations average 2.3 per cm., while the width varies from 1.5 to 5 mm. wide. In teak the corrugations are close, but they are less regular; on the other hand, among the lauans, apitong and palosapis whenever present, the "waves" are generally from one to seven centimeters apart. As may be expected the more the fibers depart from the longitudinal axis the more beautiful the grain. The corrugations are seldom, if ever, horizontal, but are almost always slightly diagonal.

The following woods often have a wavy grain: molave (*Vitex parviflora*), amugis (*Koordersiodendron pinnatum*) bansalagin (*Mimusops parviflora*), gisihan (*Aglaia laevigata*), batitinan (*Lagerstroemia piriiformis*), narra (*Pterocarpus* spp.), banuyo (*Wallaceodendron celebi-*

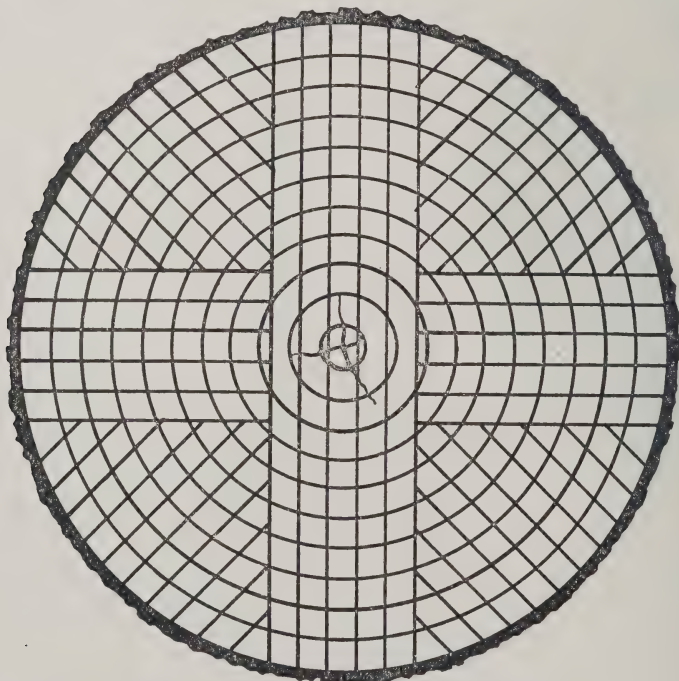


FIG. 3

This diagram shows the common methods employed in sawing silver grain stock. Note that the saw follows in a general way the direction of the wood rays.

cum), tukang-kalau (*Aglaia clarkii*), lanete (*Wrightia* spp.), nato (*Palaquium* spp.), Kalamansanai (*Neonauclea* spp.).

Near the butt of the log where the base of the bole meets the roots, the wood is often wavy or crossed grained. The same is true of "compression" woods. It is in these places where many of the most beautifully figured woods for veneers are obtained. In some woods like banuyo and several species of kalamansanai both interlocked and wavy grain occur in the same log. When properly sawn to show the corrugation, they make beautiful boards and command fancy prices.

(2) Ring Porous Woods.

Ring porous woods are those where the large pores formed during the favorable growing season are arranged in concentric rings. Narra, (*Pterocarpus*); Kalantas, (*Toona calantas*); teak, (*Tectona grandis*), banana, (*Lagerstroemia speciosa*); and batitinan (*Lagerstroemia piriformis*) all possess ring porous woods. In the cross section the large pores are arranged in concentric rings, in the radial section they run parallel with the sides of the board, but in the tangential section they exhibit a distinct florid or flame figure. It is for this reason that it is necessary to saw as much plain stock as possible out of a log possessing a ring porous structure. Not infrequently, however, ring porous woods also possess interlocking grain, in that case whatever manner the log is sawn the resulting figure is beautiful.

(3) Concentric Parenchyma

Closely related to the concentric arrangement of pores is similar arrangement of parenchyma (light colored generally narrow, concentric

bands which run perpendicular to the pith rays, such as those found in palomaria, supa, batete, piagao, tabigi, etc.). These concentric bands of light or dark colored tissue are generally narrow, but sometimes they are fairly broad and are so conspicuous that they are distinctly visible to the naked eye. The wider the bands and the greater the contrast with the back-ground of woody fibers the more distinct the grain. When quartered the boards show an even grain with fine narrowly spaced lines running along the grain of the wood, but when plain sawn we get a figure similar in outline to those found in ring porous woods.

The common furniture and cabinet timbers with distinct concentric parenchyma bands are supa (*Sindora supa*), batete (*Kingiodendron alternifolium*), palomaria (*Calophyllum inophyllum*), piagao (*Xylocarpus moluccensis*), tabigi (*Xylocarpus granatum*), and maranggo (*Azadirachta integrifoliola*).

Certain woods like tindalo (*Pahuia rhomboidea*); ipil (*Intsia* spp.); bahai (*Ormosia calavensis*); kamatog (*Erythrophoeum densiflorum*), the various species of *Terminalia*, etc. show fluctuation of growth intensity. When such woods are plain sawn the boards exhibit a florid figure similar to ring porous woods. The beauty of this grain is greatly augmented when accompanied by concentric parenchyma such as we find in ipil and tindalo.

"Silver" or "Watery" grain

Some woods with large wood rays, when quartered show very distinct "silver" or "watery" grain such as we ordinarily meet in quartered oak, because the rays are cut along their long axis. The pith rays are built up

of microscopic cells which appear solid to the naked eye and reflect light as if it were a solid body. Silver grain in quartered oak, katmon and others is by no means regular in occurrence, as not only are the rays different in width and height, but the manner in which the rays are cut also varies. The larger and straighter the rays, the more pronounced the grain of the wood, provided it is cut exactly along their long axis. While it is very essential that the wood be absolutely quartered so as to get the maximum silver grain, yet this is seldom followed in common practice on account of excessive waste in the manufacture. At the present time the most common method is as shown in figure 3.

(4) *Birdseye Grain.*

The mere mention of "birdseye" grain at once suggests maple, because the birdseye grain in this wood is impressive and is unlike any normal wood. Certain species found in the Philippines also possess at times similar grain. Among the most common of these are arañgen (*Ganophyllum falcatum*), maranggo (*Azadirachta integrifoliola*), amugis (*Koordersiodendron pinnatum*) malapaho (*Mangifera monandra*) and several others.

The "eyes" are best observed in the tangential section. They appear as knots, rounded or spindle shaped, varying in diameter from 1/16 to 1/2 of an inch in diameter. In the cross section they are not conspicuous as they appear like compound wood rays which increase in size from the pith outward. In the radial face they form broad homogeneous lines running across the board somewhat similar to quartered oak.

The greater the number of knots and the closer they are set, the more

conspicuous the "birdseye" grain. It is not known exactly what causes such abnormal features, but we know that the center of the knot is composed of thin walled parenchyma cells very similar to the pith or medulla and is surrounded by wood fibers distorted in various ways.

(5) *Grain Caused by Colored Bands.*

We have so far discussed the grain in woods caused by anatomical structure; it now remains for us to mention the grain or figure in woods which are caused by colored bands. In certain species like kamagon and dao we often observe bands of dark colored wood running along the grain. These bands, which are differently colored from the rest of the woody tissue, are heavily loaded with infiltration matters such as tannins, resins, gum, etc. which make them appear distinct. These color bandings when viewed in the transverse section of logs, appear to follow in a general way the growth rings and are therefore concentric in their arrangement. These should not be confused with similar markings caused by rot, (fungi) which are very irregular in their course and do not follow as a general rule the growth rings. Such markings are to be found in perishable species such as in the various species of *Ficus*, *Sidoroxylon*, *Myristica*, *Knema*, etc. Figures caused by concentric bands are characteristic of the various species of kamagon (*Diospyros discolor*), bolong-eta (*Diospyros pilosanthera*), *D. poncei*, etc. and ebony (*Maba buxifolia*), dao (*Dracontomelum dao*) and pahutan (*Mangifera altissima*) in which the alternating bands are dark reddish brown and black. In narek, (*Balanocarpus cagayensis*), sangilo (*Pistacia chinensis*) the bands are greenish or dark green

with a background of light yellow wood; while in malambiñgan (*Allaeanthus glaber*) the alternating bands are variously colored, consisting of shades of gray, brown and pink. In

some species like lanete, palosapis, etc. pink bands are occasionally present, but these fade out or become indistinct when the wood becomes dry.

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Proprietor

SHRINKAGE ALLOWANCE OF BOARDS OF ALMON AND WHITE LAUANS, TANGILE AND RED LAUAN, AND APITONG IN COMMERCIAL SIZES KILN DRIED TO ANY MOISTURE CONTENT

By CALIXTO MABESA

of the Division of Forest Products, Bureau of Forestry, Manila

Sometime ago when the writer was making a study of a suitable kiln-drying schedule for the species cut by a certain lumber company in the Islands, a study was made also of the shrinkage and of the allowance in dimensions to give to boards kiln dried to any moisture content. With the adoption of the National Hardwood Lumber Association Grading Rules by the Philippine Hardwood Export Association, lumber for export must be of full dimensions when shipping dry to pass inspection. A study of the proper allowance in both thickness and width merits some consideration. To be sure the recommendations made here are especially adapted for lumber in Negros, but it is believed that for practical purposes they may also serve as a guide to the operators on lauans and apitong in other regions.

Materials and Method.

The materials used in this study were kiln drying samples of varying widths from 3" to 24", 1 to 3" thick and two feet long. They were obtained from at least two feet from the ends of boards which were of average run. The ends were coated with a thick layer of yellow ochre mixed with linseed oil. There were eighty samples of the lauan group, namely, white lauan, almon, red lauan and tangile and fifteen of apitong. No effort was made to separate them botanically as these timbers belong only to one group. Moreover the group-

ing is in conformity with the commercial practice. With the exception of probably bagtikan which is denser and comes under the commercial name of white lauan, the genuine white lauan and almon are about the same density, and can be expected to have about the same shrinkage. As soon as each sample was weighed, a line was drawn at the middle across its width and thickness and measurements of same taken. Then it was placed in the kiln at the side of the load where the conditions of drying were about the same as in the whole pile. The kiln used was a progressive type operated on time schedule. The green end temperature varied with different grades of lumber, but it ranged from 140° to 160° F. with a relative humidity ranging from 70-90%, while the dry end temperature varied from 160° to 190° F. with relative humidity of 40-30% respectively. Every twenty four hours each sample was weighed and measured for both thickness and width. The measurement was always taken on the same place where the original one was made. This was continued until the load where the sample was placed was drawn out from the kiln, when its final weight and measurement were taken.

Determination of Moisture Content.

From every kiln drying sample a 1/2 inch disc was cut from each end across its entire width for moisture determination. (1) To check up the

first moisture content another 1/2 inch disc was cut across the middle of each sample after it had been taken out of the kiln. The latter was also used as a basis for further determination of shrinkage when the moisture went down to zero.

(1)

$$\begin{aligned} \text{Moisture Content \%} &= \\ \frac{\text{Green weight—oven dry weight}}{\text{oven dry weight}} \times 100 \end{aligned}$$

Results and Discussions.

The shrinkage was computed (2)

(2)

$$\begin{aligned} \text{Shrinkage \%} &= \\ 100 - \frac{\text{oven dry width}}{\text{green width}} \times 100 \end{aligned}$$

and the results were plotted in a cross-section paper using moisture content per cent as abscissa and shrinkage per cent as ordinate. The curves were drawn thru the average points. This was done on each section, tangential and radial. (See fig. 1). From the graph of figure 1, the percentage of allowance for each moisture content was obtained. (3) With this data a graph in figure 2

(3)

$$\begin{aligned} \text{D1} &= \frac{\text{D2 (100—S1)}}{100—\text{S2}} \\ \text{D1—Original dimension} \\ \text{D2—dimension at any desired M.C.} \\ \text{S1—Shrinkage \% at first M.C.} \\ \text{S2—Shrinkage \% at any desired M.C.} \\ \text{Shrinkage allowance \%} &= \\ \frac{\text{D1—D2}}{\text{D2}} \times 100 \end{aligned}$$

was drawn up using the moisture content as ordinate and the percent of shrinkage allowance as abscissa. With this graph it would be possible to ascertain the allowance either in width or thickness directly, at any moisture content. For example, it is

desired to find the allowance for shrinkage of apitong board, plain sawn so that it would be full 1" x 12" at 15% M.C., read off at 15% M.C. in the graph of apitong which is 9.2% or .092, multiply this figure by 12" and the product which is 1.11" or 1-3/32 is the shrinkage allowance. In a similar way the allowance for thickness can be figured, but instead of using tangential shrinkage allowance use the radial one. In this case at 15% M.C. it reads at radial graph for apitong 2.65% or .0265; multiply this by 1" or .0265" or nearly 1/32". The allowance therefore for thickness is 1/32". It must be remembered that in determining the width allowance of a quartered or an edge grained board, the radial shrinkage allowance graph should be used, and for its thickness the tangential one. Table I shows the shrinkage allowance for both plain and edge grained boards cut green and kiln dried to 15% M.C. In this connection it may be of interest to note that a plain sawn board of apitong dried to 15% M.C. has a shrinkage allowance of 1-3/32".

It will be noticed in figure 2 that the shrinkage has taken place when the moisture content of wood was way above the fiber saturation point, which was contrary to previous findings of other investigators. But when the facts surrounding the case are analyzed it would not be hard to see the reasons because when a piece of green wood is subjected to the drying conditions of the kiln, the surface dries accompanied with shrinkage, while the inner portion is still high in moisture content.

The shrinkage allowance for plain sawn boards of apitong is nearly 2-1/4 times as much as that for quarter sawn. This however does not

hold true at every moisture content as seen in Fig. II. At every ten per cent of the moisture content the relation varies from 1 to 1.7 at 20% and from 1 to 4 at 10%. Beginning from 30% M.C. there is a marked increase for both tangential and radial allowance. This is also true with the tangential allowance for almon and white lauan, while its radial allowance has a regular increase in shrinkage till it reaches 10% M.C. From this point it has a greater increase to zero. In the case of red lauan and tangile, the curve for shrinkage allowance for both plain and edge grained boards is a compound one. Both are regular till 20% M.C.; but beyond the point, for some unknown cause, it slackens thereby decreasing the regular increment as moisture content decreased.

There was a wide range of shrinkage variation under the same moisture content. This was to be expected because the plain sawn boards were not perfect plain sections as was the case with the quarter sawn. In the latter the shrinkage in width varies with the angle of the rays with the surface of the boards. The wider the angle the more the shrinkage. But in the thickness of the same boards the shrinkage is inversely proportional to the angle, that is, the bigger the angle the less the shrinkage. On the other hand, in plain sawn boards the outer portions near the edges are nearly quartered. This is especially true in wide boards. The greater the portion which approaches quartered section, the less the shrinkage. Moreover even in true tangen-

tial and radial sections there are variations in shrinkage within a species so that the results presented here, are, at best, approximate for wide boards. For narrow ones, say four or six inches wide, the graphs will be found to be more accurate.

SUMMARY

1. Shrinkage takes place way above the fiber saturation point (between 25 and 30% M. C.) during the kiln drying of the above species due to the rapid drying of the outer shell, while the inner portion was still wet.

2. Under the same moisture content there are variations of shrinkage in lauans and apitongs. These may be mainly caused by the fact that the boards were not true plain or quarter section.

3. The tangential allowance in per cent of apitong is 2-1/4 times as much as its radial; red lauan and tangile 1.8 more, while almon and white lauan is 1.3 more than its radial.

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TABLE I
*Shrinkage Allowance of Green Boards Kiln
Dried to 15%*

ALMON AND WHITE LAUAN

Plain Sawn		Quarter Sawn	
Dimensions green with allowance for shrinkage	Dimensions when kiln dried to 15% M. C.	Dimensions green with allowance for shrinkage	Dimensions when kiln dried to 15% M. C.
1-1/32 × 4-3/16	1 × 4	1-1/16 × 4-1/8	1 × 4
" × 6-9/32	1 × 6	" × 6-7/32	1 × 6
" × 8-3/8	1 × 8	" × 8-9/32	1 × 8
" × 10-15/32	1 × 10	" × 10-11/32	1 × 10
" × 12-9/16	1 × 12	" × 12-13/32	1 × 12
" × 14-21/32	1 × 14	" × 14-15/32	1 × 14
" × 16-3/4	1 × 16	" × 16-9/16	1 × 16

RED LAUAN AND TANGILE

Plain Sawn		Quarter Sawn	
Dimensions green with allowance for shrinkage	Dimensions when kiln dried to 15% M. C.	Dimensions green with allowance for shrinkage	Dimensions when kiln dried to 15% M. C.
1-1/32 × 4-3/16	1 × 4	1-1/16 × 4-3/32	1 × 4
" × 6-9/32	1 × 6	" × 6-1/8	1 × 6
" × 8-3/8	1 × 8	" × 8-5/32	1 × 8
" × 10-15/32	1 × 10	" × 10-7/32	1 × 10
" × 12-17/32	1 × 12	" × 12-1/4	1 × 12
" × 14-5/8	1 × 14	" × 14-9/32	1 × 14
" × 16-23/32	1 × 16	" × 16-11/32	1 × 16

APITONG

Plain Sawn		Quarter Sawn	
Dimensions green with allowance for shrinkage	Dimensions when kiln dried to 15% M. C.	Dimensions green with allowance for shrinkage	Dimensions when kiln dried to 15% M. C.
1-1/32 × 4-3/8	1 × 4	1-3/32 × 4-3/32	1 × 4
" × 6-9/16	1 × 6	" × 6-5/32	1 × 6
" × 8-23/32	1 × 8	" × 8-7/32	1 × 8
" × 10-29/32	1 × 10	" × 10-9/32	1 × 10
" × 13-3/32	1 × 12	" × 12-5/16	1 × 12
" × 15-9/32	1 × 14	" × 14-3/8	1 × 14

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LEGEND

Almon and W. Lauan.....
 Red Lauan and Tangile
 Apitong.....

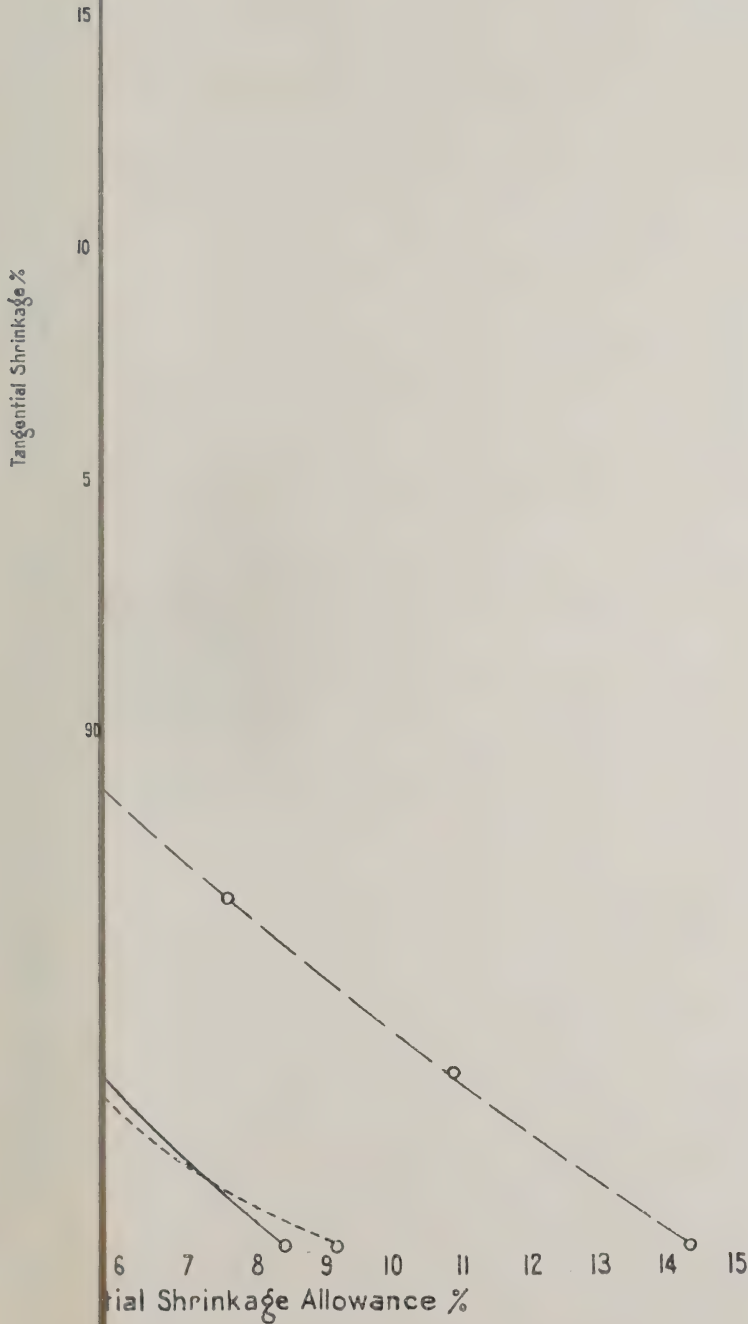
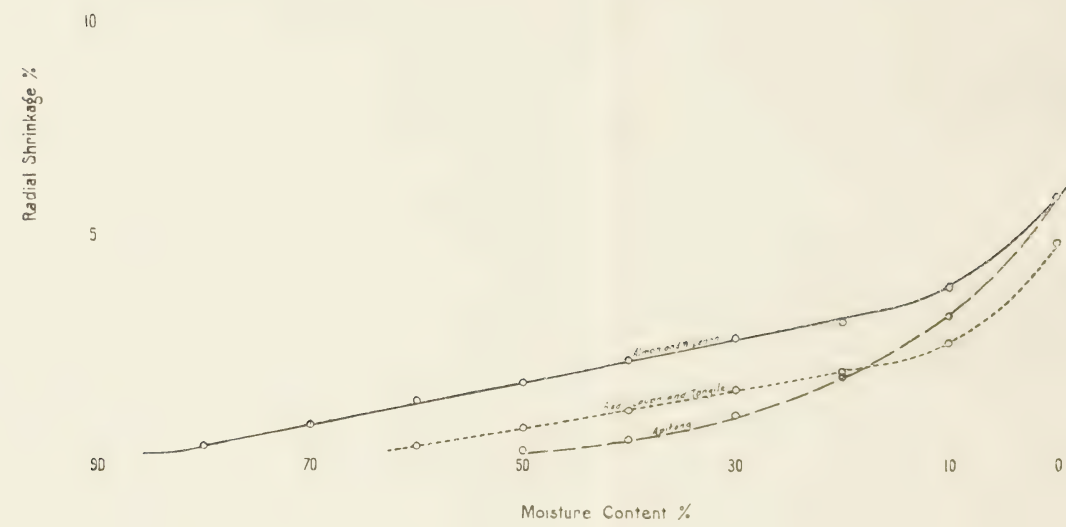




Figure 1



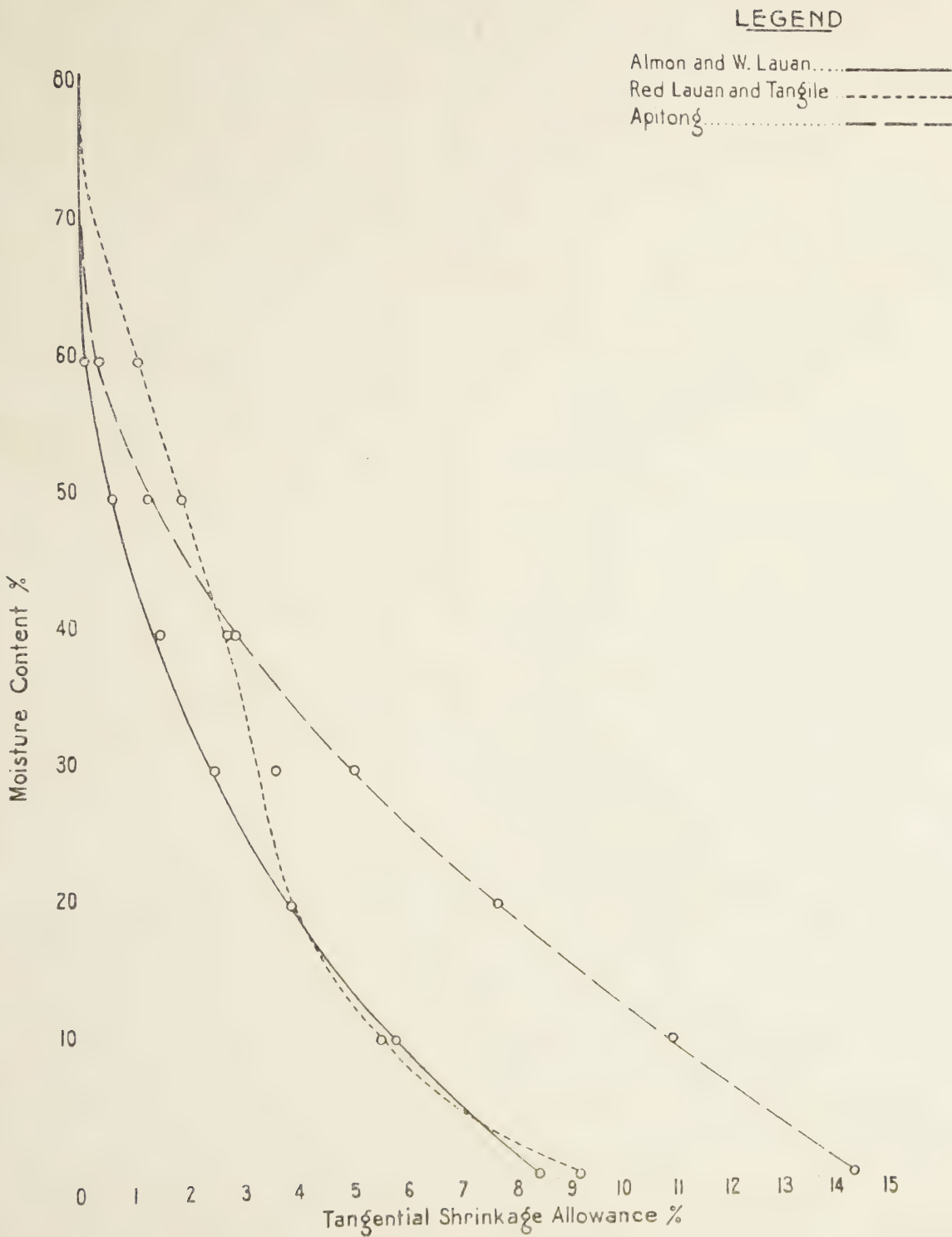


Figure II





THE ALUMNI OF THE SCHOOL OF FORESTRY

RICARDO BUHAY '25

"A tree is known by its fruits" so says an old adage. Likewise, any school or college is recognized by the quality of its graduates. Any inquiry conducted for the purpose of determining the real worth of an institution will inevitably lead to a proper reckoning of the accomplishments of its products. The products of the School of Forestry of the University of the Philippines are its graduates or alumni.

Since its establishment in 1910, up to March 1930, the School of Forestry has trained and turned out 435 graduates of the Ranger Course for public service. Of this number 10 are Chinese and two came from Guam. The remaining 425 are all Filipinos, of whom 414, or fully 95% of the total number of graduates, were pensionados of the Bureau of Forestry.

The Bureau of Forestry was more than justified in sending students at government expense to study in the School of Forestry, as this was the only possible way to induce young men to take up Forestry, then a very new and unknown course. Furthermore, students studying as pensionados are bound by contract to serve the Bureau of Forestry as Rangers for two years after graduation, thus maintaining a continuous force of personnel in the service in the event that many resign after their contracts expire.

Meanwhile the Bureau in its infant stage was manned by trained American foresters and a handful of Filipino "monteros" whose knowledge in Forestry was merely empirical. A number of these Filipino "monteros"

had to be sent to the School of Forestry to receive technical training.

The first class graduated in 1912. Thus for the first time in the history of forestry education in the Philippines, there was supplied a handful of men equipped to bridge the gap between the highly trained forester and the untrained "montero" or "guardamonte."

Since then the graduates of the School of Forestry, who average about 22 every year, excluding foreign students, kept increasing little by little the number of technical personnel in the Bureau of Forestry. It is fortunate that this is so, for the activities of the organization are also increasing in vast proportions and more men are needed to do the work.

As time went on and the activities of the service multiplied, it became necessary to send some men abroad to specialize in different branches in the field of forestry. Alumni who showed marked ability in the service were naturally selected to receive higher training abroad. Seventeen of the alumni who now hold the title of Forester have received higher forestry training in American Universities.

Aside from the Ranger Course, the School of Forestry, up to 1930, has been giving a three-year course leading to the degree of Bachelor of Science in Forestry, but this course was in previous years limited solely to those graduates of the Ranger Course who had rendered long and meritorious service to the Bureau. Two men, namely Antonio P. Racelis and Aniceto Villamil, finished this

course in 1915. These men were detailed most of the time to give instruction in the School of Forestry. Owing to exigencies of the service, however, no one was able to take up this course in succeeding years until 1923, when one man, Mr. Jose F. Nano, graduated after taking the course during seven years, taking it little by little, in the course of his teaching work in the School.

Realizing the pressing need of highly trained men to handle the more responsible work in the Bureau, and confronted by financial difficulties in sending pensionados abroad, men from the service were detailed to receive higher training in the School. As a result of this, Agapito L. Cenabre, Juan Lopez, Macario A. Mariano and Tomas N. Roque finished the degree course in 1928. In 1929 three more men from the ranks were graduated, namely, Isabelo Achacoso, Severo S. Ponce and Adriano V. Santos. In 1930 only one man, Evaristo Tabat, graduated from the degree course.

One cannot overlook the most gratifying result of this training of Filipinos for forestry work,—the Bureau of Forestry is, except for the Director, now entirely manned by Filipinos, most of whom are alumni of the School of Forestry. This Filipinization of the Bureau is of vital importance to its existence; Americans sooner or later go back to their home country, and it remains for the Filipinos to administer the Philippine Forest Service for all time.

The early graduates of the Ranger Course, especially those who have received higher training, are the men who now hold the most responsible positions in the Bureau and to whom much credit is due for the advancement of Forestry in the Philippines.

Mr. Florencio Tamesis '12 is a notable example of these men. He is the present Assistant Director and has been continuously connected with the Bureau of Forestry before and after his completion of the Ranger Course. He has over 20 years of service to his credit.

The different divisions, except two, and all the district offices of the Bureau of Forestry are ably headed by alumni of the School of Forestry. Such men as Foresters Felix Franco '12, Alejandro de Mesa '12, Antonio P. Racelis '12, Florencio Tamesis '12, Isabelo Achacoso '13, Porfirio San Buenaventura '13, Juan Lopez '13, Cecilio Maneja '13, Jose F. Nano '13, Nazario Peñas '13, Severo S. Ponce '13, Luis J. Reyes '13, Doroteo Soriano '13, Agapito L. Cenabre '14, Placido Dacanay '14, Tomas N. Roque '14, Adriano V. Santos '14, Felipe R. Amos '15, Calixto Mabesa '15, Macario A. Mariano '15, Carlos Sulit '15, Sixto Laraya '17, Valentin Sajor '17, Eugenio de la Cruz '18, Juan Daproza '19, Gregorio Zamuco '21 and many other older graduates are men whose services to the public are an inspiration to the younger graduates.

While much credit is due to the old graduates for guiding their men in the performance of public service, it must not be overlooked that the great bulk of the work is done by the subordinate men in the rank of Ranger, who constitute about 87% of the total number of the technical personnel in the service. These men are the real "watch dogs" of the public forest. At salaries barely enough to maintain a hand-to-mouth existence, they work conscientiously, defying the hardships of mountain fastnesses and gathering valuable information for the benefit of the public. Many are stationed in saw-

mill operations to scale logs, and these are the men mainly responsible for the yearly collection of about one million and a half pesos revenue for the government since 1924.

A number of the Alumni in the service have figuratively been "grabbed" by lumber companies and other concerns by offering them positions at more than twice the salaries they are getting from the government. This state of affairs has a disadvantageous effect upon the Bureau, since it cannot afford to lose any of its men. On the other hand, the employment of these men by lumber companies brings an indirect advantage to the government in that these men give technical counsel to the companies employing them which is conducive to a wise utilization of the forest.

One by one men separate from the service, induced either by more remunerative positions or by the desire to live independent private lives, nevertheless, the influence of the School of Forestry upon those who remain will keep the organization ever working for the fruitful realization of an ideal—the conservation and wise utilization of our forests.

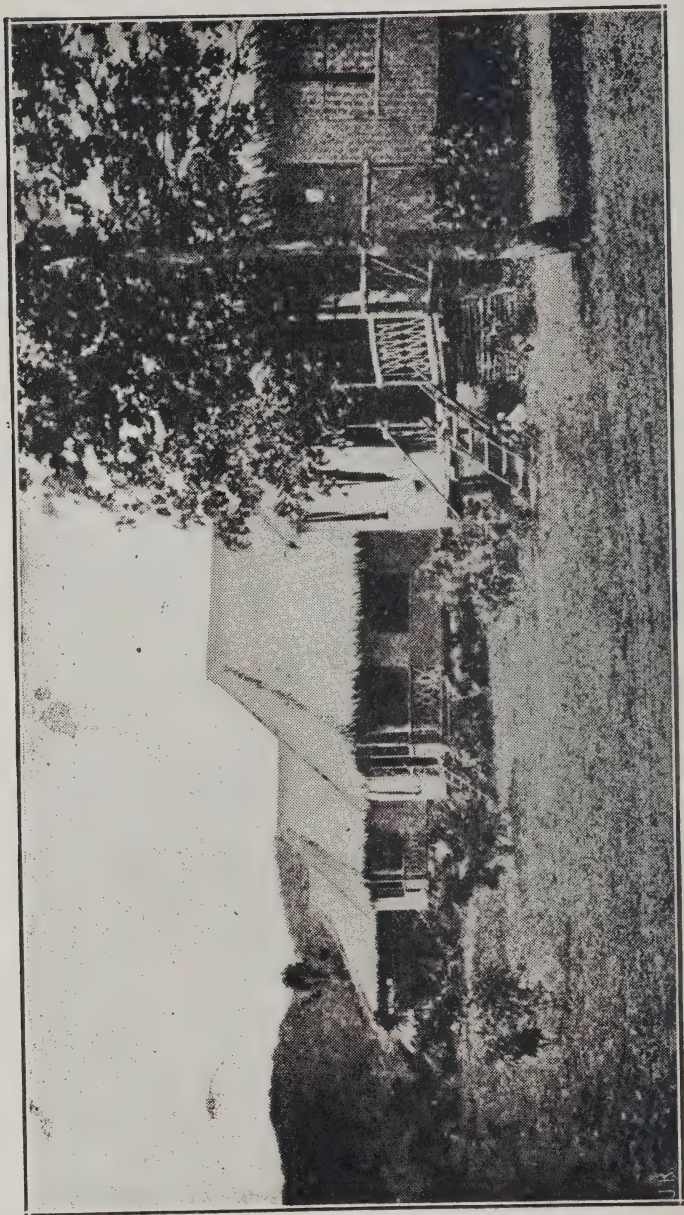
The present success of the alumni in forestry work cannot be credited to themselves alone. Much credit is due to Ex-Commissioner Jaime C. de Veyra and Major George P. Ahern, former Director of Forestry, by whose efforts the creation of the School of Forestry was made possible. Another man to whom the alumni are greatly indebted is Mr. Arthur F. Fischer, Dean of the School and Director of the Bureau of Forestry from 1917 to the present time. Closely identified not only with the success of the alumni but also of the forestry movement in the Philippines are such men as: M. J. Oteyza, R. C. Bryant, W. F. Sherfese, H. N. Whitford, D. M. Matthews, F. W. Foxworthy, E. E. Schneider, H. M. Curran, Roy Nash, O. F. Bishop, M. D. Knapp, J. R. Gillis, R. B. Weaver, E. B. Copeland, W. H. Brown, T. C. Zschokke, O. W. Pflueger, Harold Cuzner, William Klemme and others.

Having seen how the different alumni have served the government and the public, it might be interesting to know the present occupational status of all the living alumni of the School of Forestry together with some interesting statistics.



If our forests are to be perpetuated, the forest industries need to become forest-minded instead of lumber-minded.

—Ward Shepard.



*Former Student Quarters—School of Forestry
(1910-1916)*

Distribution of

Provinces

Abra
Agusan
Albay
Antique
Apayao (Mt. Prov.) ...
Bataan
Batangas
Benguet (Mt. Prov.) ...
Bohol
Bukidnon
Bulacan
Cagayan
Camarines Norte
Camarines Sur
Capiz
Cavite
Cebu
Cotabato
Davao
Ifugao (Mt. Prov.)
Ilocos Norte
Ilocos Sur
Iloilo
Isabela
Kalinga (Mt. Prov.) ...
Laguna
Lanao
La Union
Leyte
Manila
Marinduque
Masbate
Mindoro
Misamis
Nueva Ecija
Nueva Vizcaya
Occ. Negros
Or. Negros
Palawan
Pampanga
Pangasinan
Rizal
Romblon
Samar
Sorsogon
Sulu
Surigao
Tarlac
Tayabas
Zambales
Zamboanga

Foreign Students:

China
Guan

Total

NOTE:—*—Bc

†—1

TABLE I

Distribution of Alumni of the School of Forestry by Classes and Provinces or Countries Represented as of March 31, 1930

Provinces	CLASSES																				Total
	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
Abra								1	1	...	1	1	...	...	...	...	...	2	2	8
Agusan																					
Albay		1	2	2								1*							4	10	
Antique															2	1	2		2	7	
Apayao (Mt. Prov.)																	1		1	1	
Bataan		1	1										2					1	2	7	
Batangas	1			1		3				1								3	2	12	
Benguet (Mt. Prov.)												2		2	1	1	3†			9	
Bohol		1		1				1						1						4	
Bukidnon																					
Bulacan	1	2		2	2			1		1	1			1		3			2	16	
Cagayan		1	2		2	2		1	3	1		2		3		2	1		1	21	
Camarines Norte									1											1	
Camarines Sur		3	1			2		3	1	1				1	3					15	
Capiz				1	1	1	1	3						1	1	1			3	13	
Cavite		1	1	1	1										1	1	1		1	7	
Cebu	1		1			1	1				2			1			1			8	
Cotabato															*			1		1	
Davao								1								1				1	
Ifugao (Mt. Prov.)																1	1			2	
Ilocos Norte	1	1	1			2	2			1		4	3	2	1*1					20	
Ilocos Sur	1	1	2	1		1	1	1		3		1			1	1	2	1	1	18	
Iloilo	1	2		3		2	1		1	1	2	1	1		1	2			1	18	
Isabela			1		2			1	1		1	1							1	8	
Kalinga (Mt. Prov.)															1					1	
Laguna		1	2	1					1		2	1	2					1	1	12	
Lanao		1	1																	2	
La Union		1	1		1				1		1*	1	2	1*	2			1	1	13	
Leyte	1								1		3	1	1	1*	1					9	
Manila		1	1				1							1				1	2	7	
Marinduque		1																		1	
Masbate															1		1		1	3	
Mindoro		1	1																	2	
Misamis		1	1									1	1		1				1	6	
Nueva Ecija	1		1		2			2				1*	1*			1			1	10	
Nueva Vizcaya						2								1			1	1		5	
Occ. Negros		1			1		2						2				1		1	8	
Or. Negros	2						3													5	
Palawan		1							*											1	
Pampanga	2	1	1	1		1				1				1	1			1	1	11	
Pangasinan		2	2	3	3	1	4	3	4	4	4	2	3	1	1	2	3	1		43	
Rizal		1		1	2	1	1	1		1					1	2			1	13	
Romblon			1																	1	
Samar		1										1	1	1			1			7	
Sorsogon	1		1								2*				1			1		6	
Sulu												1					1			1	
Surigao										1										1	
Tarlac	1		4		1	1				1		1	2*	2		1	1	1	1	17	
Tayabas	3		1			1	1			1			1		1		5	3		17	
Zambales		2	1	1	1		1			1	3	2						2		14	
Zamboanga			1										1				1	1		4	
Foreign Students:																					
China			1	1	3		1	1	3											10	
Guan					2															2	
Total	17	29	32	20	24	21	20	20	20	15	25	24	25	20	22	22	26	22	31	435	

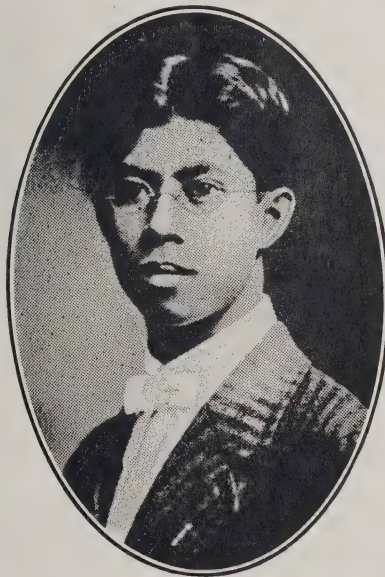
NOTE:—*—Borneo pensionado or special student.

†—1 Private student among the three.

TABLE II

Summary of the Present Occupations of the Alumni of the School of Forestry

A—Graduates with occupations forestry in nature	343	78.85%
Distributed as follows:		
1. Employed by the Bureau of Forestry	275	63.22%
2. Forest Officers, British North Borneo	11	2.53%
3. China Forest Service	9	2.07%
4. Guam Forest Service	2	0.45%
5. Employed by other Bureaus or Offices of the government	13	2.99%
6. Employed by lumber companies and other private concerns with work of forestry nature	24	5.52%
7. Timber licensees	3	0.69%
8. Studying forestry abroad	6	1.38%
B—Graduates with occupations not directly connected with forestry	70	16.09%
Distributed as follows:		
1. Government employees	10	2.30%
2. Farmers	24	5.52%
3. Professional and Businessmen	13	2.99%
4. Philippine Constabulary Officers	5	1.15%
5. United States Army Officers	2	.45%
6. Miscellaneous employments	7	1.61%
7. Occupations not reported	9	2.07%
C—Deceased graduates	22	5.06%
Grand Total	435	100.00%



MAURICIO J. OTEYZA
Prominent Filipino Forester
 1886-1926

THE FOLLOWING ARE TAKEN AT RANDOM FROM STATE-
MENTS MADE BY THE GRADUATES OF THE SCHOOL
OF FORESTRY ON WHAT THE FOREST SCHOOL
EDUCATION HAS MEANT TO THEM

Forest School Education has taught me not only to appreciate the value of our Natural Resources, but also to know that the more time we devote to its conservation, the more we understand the work of our CREATOR.

Rafael San Pedro '19

It has made me fit for any field work and has trained me to arrive at a quick solution of my everyday problems.

Nemesio Catalan '16

Measured in terms of money or popularity, my Forest School education has meant little to me. But the feeling of brotherhood with my classmates and co-alumni, the intensive mental and physical training in Nature's great laboratory, together with my superiors' faith in my work—all these have developed in me a deep sense of loyalty and righteousness and a burning desire, notwithstanding obstacles, to accomplish more and better things; and above all,—to play the part of a good and useful citizen.

Ricardo Buhay '25

My Forest School education has moulded me to tackle practical life. The training that I had in honesty, industry, perseverance, independence and fellowship has been a great asset in the preparation for my future life. Even if I were to go out of the Bureau of Forestry, I would not be afraid to lead a private life, because I am confident, thru my education and training in the Forest School, of being able to enjoy life's best.

Guillermo Ponce '26

It taught me how to love and appreciate the beauty of nature and the true and real meaning of work.

Januario De Paz '26

It has taught me not to be afraid to work with my hands. It has shown me what "Forestry" really is. I owe my present position to the knowledge I gained in the Forest School.

Jose Seneca '24

Forest School education, acquired by me from April, 1925 to March, 1927, helped much to uplift me above the average. It taught me companionship, brotherhood, love, and willingness to work and sacrifice, and most of all, the Bureau's spirit for a united force in any undertaking, the "esprit de corps".

Canuto O. Barte '27

The Forest School education has meant a great deal to me; it gives me wise guidance and furnishes me the tools for any work I am going to handle.

Segundino Regondola '30

My Forest School education has taught me to love work and dignify it. The easy-go-lucky attitude toward life that I held before has vanished. I have a purpose in life.

The chummy companionship and the friendships formed at the Forest School—who shall duly glorify them? I am one of the brotherhood.

Juanito S. Ilustrisimo '28

The education in the Forest School has not merely prepared me for my present position; it has taught me to appreciate not only the value of our forests, but also the value of clean and honest living.

Estanislao Loyola '24

My Forest School education has shaped me to be self-reliant, punctual, courteous and honest. It is to me a constant mentor, warning me to be modest in dealing with my superiors and the public and to act justly, humbly and uprightly toward all in my capacity as Ranger.

Santiago A. Berbano '27

The Forest School education has made me a man and is responsible for my social, physical, mental and intellectual uplift.

Domingo P. Ramel '24

It is a stepping stone which affords me a better view of the country, geographically, economically and politically.

Nicolas Estabillo '29

My Forest School education, above everything, taught me the real "spirit of service". It enhanced in me self-reliance, self-respect, honesty and diligence, all essential to a public servant. It gave me the convincing proof that college education is but a prelude to real life, much more so when that life is dedicated to the country's welfare; that life is continuous study for the interest of hummanity; that honest labor and patience spell success.

Perfecto C. Clemente '27

Forest School education has meant to me a great deal. Human life is similar to the life of trees. In an association of trees in a certain stand, the growth of the poor species is retarded by the stronger ones, because they are overshadowed so that they cannot get light from the sun. So in human life, the rise of the poor is hindered by the powers of the stronger ones, so that the poor have to struggle in order to exist and to survive.

Irineo Dueñas '29

My Forest School education has enabled me to carry on the work and responsibilities with which I have been entrusted by the Bureau of Forestry since 1920 up to the present. My duties have carried me to many different parts of the Islands, where I obtained wide experiences of all sorts of life, experiences that are helpful to me for the maintenance of myself and family. On the other hand, however, I am sorry to state that it has kept me still a poor man.

Leonor Lizardo '20

First and foremost, it has given me a wider outlook on life. It has been a revelation to me as showing the need of leadership, responsibility and service to all from the humblest illiterate homesteader in the remote recesses of the wilderness to the most learned and aristocratic of our country.

Bernardo R. Yolores '28

The Forest School education has prepared me for the work which provides for the necessities of life and the education of my children; which helps me to understand nature's power in the mysterious development of life, the wonder of growth; which teaches me the wise use of the wealth treasured in the breast of mother earth in the form of mines, waters, and forests, the animal and plant life associated with its existence and dependence upon its products, the economic value of each and their relation to each other; which teaches me, in unmistakable terms, the various ways of loving one's country and supporting its ideals; which prepares me to meet the intricate and vexing problems of existence; and which proves to me the value of *SERVICE* to God, to myself, to my family, to my country, and the value of *LOYALTY* not only to the Government, but also to my *ALMA MATER*.

Tomas N. Roque '14

God created man to play his own part in the "Survival of the Fittest" in the world-tragedy. The plant is also a creation of God. In human and plant sociology the struggle for existence is very keen. Others may select and play their own parts and struggle to be shining stars. I have my own part,—I could bequeath no finer heritage to coming generations and no greater and nobler service could be rendered as tribute or homage to the people of our time than to grow trees where trees should grow.

Manuel Malana '17

Forest School education has started me in life.

Julio G. Sales '26

It has not only given me a considerable knowledge of forestry, but also it has imbued me with the spirit of service; both are essential to the proper and conscientious performance of the duties entrusted to me.

Isabelo Achacoso '13

It gave me my health, well-being and more than that, the will to push ahead. It means therefore the highest gift that I have ever received.

Gabino Montillo '29

The technical training one acquires at the Forest School of the University of the Philippines, at Los Baños, qualifies an individual to work for the proper utilization and conservation of our forest resources, so vital to agriculture and other industries. As one of its graduates in the Ranger course, I do not hesitate to recommend the School with pride to any competent and enterprising young man desirous of getting an education that may sufficiently prepare him shoulder the responsibilities of a position in or outside of the government service.

Braulio Libadia '29

The Forest School education has given me the foundation upon which to build up my experience in the lumber game. Its teaching has given me a technical mind and its training, a working body.

Davis S. N. Hsia '19

An appreciation of public service, and an ever increasing feeling of obligation toward the Filipino people.

Severo S. Ponce '13

In the Forest School I have not only learned how to work, but also to be honest, helpful and cooperative.

Teodoro Malaggay '29

The education which I received from the Forest School is always my Guiding Star wherever I go in my practical work. It is a companion ever ready to help me clear the way towards the light and truth in my technical work.

In my actual work both in the field or in the office, it is a strong and steady foundation upon which I have built and still continue building the treads of my stairway upward to a better and higher understanding of my duty to my country and my people and my God.

Vicente Gobuyan '27

It formed the nucleus of my attitude toward the performance of my mission in life.

Maximo Felix '28

The Forest School education has really taught me to become a better man and to benefit by my experiences in the actual work of life.

Joaquin Estrada '22

It has done me a great deal of good. Altho the course was but two years, my association with those professors and instructors of the early times whose leadership and initiative are beyond question, has made me what I am to-day.

Mariano O. Castillo '14

Telephone 6-75-62

P. O. Box 2290

International Hardwood and Veneer Company

**Main Office—P. V. O. Building
Calle Pureza**

Manila, P. I.

**Mill:
Pangil, Laguna Province**

**Cable Address:
INTERWOOD**

DIRECTORY OF THE ALUMNI OF THE SCHOOL OF FORESTRY

University of the Philippines RANGER COURSE

Class of 1912

1. Angeles, Agustin
Batangas
Forest Inspector, Bureau of Internal Revenue.
2. Barros, Cayetano
Ilocos Sur
Officer in Charge of Station, Bureau of Forestry, Bangued, Abra.
3. Contreras, Aquilino
Iloilo
Timber Cruiser, International Hardwood & Veneer Mfg. Co., Pañgil, Laguna.
4. Domingo, Damian
Tarlac
Public Land Inspector, Bureau of Lands.
5. Fajardo, Ramon
Sorsogon
Businessman, Manila.
6. Ferrariz, Ceferino
Cebu
Farmer-Land Owner, Kolambugan, Lanao.
7. Franco, Felix, B.S.F. (Montana), M.F. (Cornell Univ.)
Pampanga
Asst. Chief, Division of Forest Management, Bureau of Forestry, Manila.
8. Leaño, Eladio, Ll.B. (Philippine Law School).
Ilocos Norte
Attorney; Forest Supervisor; Chief, Special Permit Section, Bureau of Forestry.
9. Mesa, Alejandro de, M.F. (Cornell University).
Pampanga
Forester-Entomologist & Pathologist, Bureau of Forestry.
10. Muñasque, Cruz
Leyte
Businessman, Cebu.
11. Pascual, Ysmael
Bulacan
Employee, Sugar Central, Del Carmen, Pampanga.
12. Racelis, Antonio P., B.S.F. (U.P.), M.S.F. University of Michigan)
Tayabas
Forester, Bureau of Forestry
Associate Professor of Forest Engineering, School of Forestry.
13. Rendal, Bernardo
Negros Oriental
Farmer, Dumaguete, Negros Oriental
14. Tamesis, Florencio, B.S.F., M.F. (Univ. of Washington)
Tayabas
Asst. Director, Bureau of Forestry.
15. Villamil, Aniceto, B.S.F. (University of the Philippines)
Negros Oriental
Farmer-Land Owner, Dumaguete, Negros Oriental.

Class of 1913

1. Abellanos, Ricardo
Misamis
Chief Clerk, District Engineer's Office, Cagayan, Misamis.
2. Achacoso, Isabelo, B.S.F. (University of the Philippines)
Zambales
District Forester, Bur. of Forestry, Aparri, Cagayan.
3. Belen, Leon
Bulacan
Lumber Grader, Mindanao Lumber Co.
Naga-Naga, Zamboanga.
4. Buenaventura, Porfirio San
Camarines Sur
Assistant Forester, Division of Forest Investigation, Bureau of Forestry, Agricultural College, Laguna.

5. Cailipan, Catalino, LL.B.
Bulacan
Provincial Fiscal, Calapan, Mindoro.
6. Cruz, Florencio
Rizal
Moro-Logging Superintendent, Findlay Millar Timber Co.
Land Owner, Kolambugan, Lanao.
7. Hirro, Jose B.
Negros Oriental
Timber Licensee-Businessman
Ylog, Negros Occidental.
8. Fernandez, Rafael
Palawan
Provincial Commander, Phil. Constabulary
Capiz, Capiz.
9. Lopez, Ciriaco, LL.B.
Ilocos Norte
Justice of the Peace, Baguio, Mt. Province.
10. Lopez, Juan, B.S.F. (University of the Philippines)
Albay
District Forester, Bureau of Forestry
11. Lumuntad, Eustaquio
Samar
Lieutenant, Philippine Constabulary
12. Macerin, Felix
Bohol
Timber Licensee, Bilar, Bohol
13. Maneja, Cecilio, LL.B. (Univ. of Manila), M.F. (Yale Univ.)
Marinduque
Forester, Acting Chief, Division of Forest Lands and Regulations, Bureau of Forestry
14. Manuel, Fortunato
Manila
Employee, Atlantic Gulf and Pacific Co., Manila
15. Nano, Jose F., B.S.F. (University of the Philippines)
Pangasinan
District Forester, Bureau of Forestry, Tacloban, Leyte
16. Nave, Eleuterio
Cavite
Lieutenant, Philippine Constabulary
17. Oro, Maximo
Iloilo
Forest Supervisor, Bureau of Forestry, Agri. Coll., Laguna
18. Peñas, Nazario, B.S.F., M.F. (Univ. of Washington)
Camarines Sur
Mill Manager, Sta. Clara Lumber Co.
Punta Flecha, Zamboanga
19. Ponce, Severo S., B.S.F. (Univ. of the Philippines)
Bataan
District Forester, Bureau of Forestry, Davao, Davao
20. Reyes, Luis J., B.S. (Syracuse University)
Manila
Forester-Wood Technologist; Acting Chief, Division of Forest Products, Bureau of Forestry
Prof. Lecturer on Wood Technology, School of Forestry
21. Sabino, Rufino
Pampanga
Captain, Philippine Constabulary, Iloilo, Iloilo
22. Soriano, Doroteo, Surveying Course (U. P.)
Pangasinan
Forester-Forest Surveyor, Bureau of Forestry, Asst. Professor of Forest Surveying, School of Forestry
23. Suyat, Apolinario
La Union
District Land Officer, Bureau of Lands
Solano, Nueva Vizcaya
24. Valencia, Numeriano
Iloilo
Farmer-Land Owner, Masbate, Masbate
25. Tabat, Evaristo, B.S.F. (University of the Philippines)
Camarines Sur
Forest Supervisor, Bureau of Forestry
26. Velasco, Vicente
Ilocos Sur
Farmer-Land Owner, Echague, Isabel

Class of 1914

1. Acuña, Ramon
Albay
Forest Supervisor, Bureau of Forestry

2. Adduro, Marcelo, LL.B.
Cagayan
Attorney—Commercial Agent, Bureau of Commerce & Industry
3. Agama, Jose
Bataan
Forest Officer, Sandakan, British North Borneo
4. Baldemor, Julio
Laguna
Ranger, Bureau of Forestry
5. Cardona, Francisco
Tarlac
Accountant, Tom's Dixie Kitchen, Manila
6. Castillo, Mariano O.
Ilocos Norte
Timber Cruiser, Filipinas Lumber Co.
Kabibihan, Tayabas
7. Castillo, Vicente, Surveying Course (U. P.)
Zambales
Forest Supervisor-Forest Surveyor
Bureau of Forestry
8. Cenabre, Agapito L., B.S.F. (Univ. of the Philippines)
Cagayan
District Forester, Bureau of Forestry, Cebu, Cebu.
9. Dacanay, Placido, B.S.F. (Montana State University) M.F. (Yale Univ.)
La Union
Chief, Division of Forest Management, Bureau of Forestry
10. Duran, Jesus
Camarines Sur
Farmer-Land Owner, Nabua, Camarines Sur
11. Edmilao, Emitterio
Misamis
Ranger, Officer in Charge of Station
Bureau of Forestry, Laoang, Samar
12. Fajatin, Felipe LL.B. (National University)
Ilocos Sur
Attorney-Commercial Agent, Bureau of Commerce & Industry
13. Gañgan, Pedro
Isabela
Ranger, Bureau of Forestry
14. Guerrero, Carlos
Ilocos Sur
Ranger, Officer in Charge of Station, Bureau of Forestry
Arayat, Pampanga
15. Kapuno, Filemon
Cebu
Ranger, Bureau of Forestry
16. Labitag, Gregorio
Sorsogon
Ranger, Bureau of Forestry
17. Larracas, Ramon
Marinduque
Farmer, Ilog, Negros Occidental
18. Martinez, Antonio
Albay
Lieutenant, Philippine Constabulary
19. Mayor, Pacifico
Romblon
Secretary, Provincial Board, Romblon, Romblon
20. Natividad, Peregrino
Zamboanga
Technical Employee, Phil. Cutch Corporation, Zamboanga
21. Oliveros, Severo
Laguna
Chief Lumber Inspector, Bureau of Forestry
22. Pascual, Justo M.
Tarlac
Senior Ranger, Bureau of Forestry
23. Razon, Maximiano
Tarlac
Employee, Bureau of Education, Manila
24. Riego de Dios, Gorgonio
Cavite
Asst. Manager, American Land & Comm. Co.
Lebak, Cotabato
25. Roque, Tomas N., B.S.F. (Univ. of the Philippines)
Pampanga
District Forester, Bureau of Forestry, Naga, Camarines Sur
26. Santos, Adriano V., B.S.F. (Univ. of the Philippines)
Manila
District Forester, Bureau of Forestry, Lucena, Tayabas
27. Tansioco, Crispino
Tarlac
Student, Manila
28. Valderrama, Felipe
Pangasinan
Employee, Ford Motor Corporation, Detroit, U. S. A.

29. Villavicencio, Vitaliano
Nueva Ecija
Water Inspector, Bureau of Public Works
30. Hsia Chi Shi
China
Chinese Forest Service

Class of 1915

1. Amos, Felipe R., B.S.F. (Univ. of Washington), M.F. (Yale Univ.)
Zambales
District Forester, Bureau of Forestry, Zamboanga.
2. Catalan, Juan, LL.B.
Iloilo
Attorney, Tolong, Oriental Negros
3. Ceballos, Vicente
Iloilo
Occupation not reported
4. Franco, Leon
Pampanga
Occupation not reported
5. Jurado, Mariano, B.S.A. (Univ. of the Phil.)
Ilocos Sur
Agricultural Inspector, Bureau of Plant Industry
6. Lazaro, Jose
Bulacan
Occupation not reported
7. Mabesa, Calixto, B.S.F., M.F. (Syracuse University)
Negros Occidental
Forester, Bureau of Forestry
Lecturer on Wood Technology, School of Forestry
8. Mariano, Macario A., B.S.F. (Univ. of the Philippines)
Pangasinan
Asst. Forester, Bureau of Forestry
9. Miras Gregorio
Albay
Administrative Officer, Bureau of Forestry
Tacloban, Leyte
10. Pacis, Jose G.
Albay
Ranger, Officer in Charge of Station, Masbate, Masbate
11. Sandique, Julian, D.V.M. (U. P.)
Pangasinan
Teacher, Mindoro High School, Calapan, Mindoro
12. Somonte, Antonio
Cavite
Logging Foreman, Basilan Lumber Co., Basilan

13. Sulit, Carlos, M.F. (Yale University)
Laguna
Forester, Chief, Division of Forest Investigation, Bureau of Forestry
Asst. Professor of Forest Management, School of Forestry, Agricultural College, Laguna
14. Tocmo, Bernardo
Bohol
Ranger, Bureau of Forestry
15. Victorio, Urbano
Rizal
Businessman, Abuyog, Leyte
16. Villanueva, Probo
Capiz
Occupation not reported
17. Soong Ding Moo
China
Chinese Forest Service

Class of 1916

1. Ablaza, Mauro
Bulacan
Officer in Charge of Station, Impalutao, Bukidnon
2. Alviar, Enrique
La Union
Lumber Grader, Mindanao Lumber Co.
Naga-Naga, Zamboanga
3. Azurin, Mamerto
Isabela
Administrative Officer, Bureau of Forestry
Aparri, Cagayan
4. Babaran, Santiago
Isabela
Farmer, Naga-Naga, Zamboanga
5. Catalan, Nemesio A., B.S.A.; D.V.M. (U. P.)
Negros Occidental
First Lieutenant, U. S. A.
Fort Stotsenburg, Pampanga
6. Catambay, Atanasio
Rizal
Ranger, Bureau of Forestry
7. Daclizon, Julian
Zambales
Timber Licensee, Botolan, Zambales
8. Fernandez, Maximo E.
Cavite
Employee, Bureau of Audits, Manila
9. Guzman, Lorenzo de
Nueva Ecija
Private Attorney, Gapan, Nueva Ecija

10. Lopez, Melecio
Rizal
Chief, Issue Section, Bureau of Forestry
11. Madrid, Edilberto
Pangasinan
Administrative Officer, Bureau of Forestry
Baguio, Mt. Province
12. Mallonga, Angel
Cagayan
Officer in Charge of Station, Bureau of Forestry
Butuan, Agusan
13. Manzano, Tomas
Capiz
Occupation not reported
14. Mendoza, Deogracias
Bulacan
Businessman, Manila
15. Resultan, Enrique LL.B.
Pangasinan
Attorney-Businessman, Lucena, Tayabas
16. Rola, Francisco
Cagayan
Senior Ranger, Bureau of Forestry
17. Roque, Benito L.
Nueva Ecija
Ranger, Bureau of Forestry, Puerto Princesa, Palawan
18. Serrano, Luis
Tarlac
Asst. City Editor, The Tribune, Manila
19. Versoza, Juan S.
Pangasinan
Forest Supervisor, Bureau of Forestry
20. Li Shen Tuan
China
Chinese Forest Service
21. Shi Ping Chi
China
Chinese Forest Service
22. Tang Ti Shen
China
Chinese Forest Service
23. Guerrero, Joaquin
Guam
Guam Forest Service
24. Salas, Jose
Guam
Guam Forest Service

Class of 1917

1. Afalla, Pedro
Nueva Vizcaya
Administrative Officer, Bureau of Forestry
Dagupan, Pangasinan
2. Babao, Sixto
Batangas
Farmer-Land Owner, Davao, Davao
3. Baculi, Mauro
Cagayan
Bureau of Audits, Manila
4. Causing, Ptolomeo
Cebu,
Employee, Atlantic Gulf & Pacific Co., Manila
5. Cristobal, Braulio
Tarlac
Ranger, Bureau of Forestry
6. Defensor, Vicente
Iloilo
Administrative Officer, Bureau of Forestry
Zamboanga, Zamboanga
7. Guieb, Bernabe
Ilocos Norte
Ranger, Bureau of Forestry
8. Guzman, Deogracias
Nueva Vizcaya
Ranger, Bureau of Forestry
9. Laguio, Leonardo
Marinduque
Asst. Provincial Treasurer
Calapan, Mindoro
10. Laraya, Sixto, B.S.F. (Montana State University)
Batangas
District Forester, Bureau of Forestry
Baguio, Mt. Province
11. Legaspi, Nicanor
Camarines Sur
Employee in an Electric Co., Manila
12. Malana, Manuel
Cagayan
Officer in Charge of Station, Bureau of Forestry
Dumaguete, Negros Oriental
13. Martelino, Pastor, Graduated U.S.M.A. (West Point)
Capiz
First Lieutenant, U. S. Army
14. Montalvo, Manuel
Batangas
Ranger, Bureau of Forestry
15. Ramirez, Inocencio
Camarines Sur
Ranger, Bureau of Forestry

16. Santos, Nicanor
Rizal
Chief Lumber grader, Findlay Millar
Timber Co.
Kolambugan, Lanao
17. Sajor, Valentin B.S.F. (Univ. of Idaho), M.F. (Yale Univ.)
Ilocos Sur
District Forester, Bureau of Forestry, Manila
18. Simeon, Macario
Pampanga
Farmer, Catabañgan, Camarines Sur
19. Tomeldan, Perfecto
Pangasinan
Officer in Charge of Station, Bureau of Forestry
Ormoc, Leyte
20. Villafior, Vicente
Iloilo
Employee, Pacific Lumber Co.
Manila
10. Reyes, Silvino
Pangasinan
Ranger, Bureau of Forestry
11. Rojas, Leon
Negros Occidental
Farmer, Surigao, Surigao
12. Rondario, Maximino
Capiz
Ranger, Bureau of Forestry
13. Salvosa, Felipe, B.S.F. (Syracuse Univ.), M.S. (Harvard)
Tayabas
On fellowship abroad
14. Soloria, Norberto
Pangasinan
Farmer, Atimonan, Tayabas
15. Tupas, Manuel
Iloilo
Farmer, Ilog, Negros Occidental
16. Valdez, Jose
Pangasinan
Farmer, Tayug, Pangasinan
17. Villanueva, Alberto
Zambales
Agent of a Life Insurance Co., Manila
18. Zosa, Vicente
Cebu
Farmer, Ilog, Negros Occidental
19. Fu Huang Kuang
China
Chinese Forest Service

Class of 1918

1. Abarro, Domingo
Negros Occidental
Surveyor, Naga-Naga, Zamboanga
2. Amor, Roman
Negros Oriental
Lumber Buyer, Bureau of Supply, Manila
3. Arizabal, Gregorio
Ilocos Sur
Ranger, Bureau of Forestry
4. Baltazar, Alejandro M.D. (Univ. of Oklahoma)
Rizal
Physician, San Mateo, Rizal
5. Cruz, Eugenio de la, B.S.F. (Univ. of Idaho), M.F. (Yale Univ.)
Pangasinan
Asst. Chief, Division of Forest Surveys & Maps
Bureau of Forestry, Manila
6. Damo, Ambrosio
Ilocos Norte
Farmer, Ilog, Negros Occidental
7. David, Aniano
Manila
Ranger, Bureau of Forestry
8. Elumir, Gregorio LL.B.
Negros Oriental
Officer in Charge of Station, Bureau of Forestry
San Jose, Mindoro
9. Flores, Jose
Negros Oriental
Ranger, Bureau of Forestry
1. Aduviso, Pedro
Camarines Sur
Ranger, Bureau of Forestry
2. Aguilar, Luis
Camarines Sur
Ranger, Bureau of Forestry
3. Andrada, Juan C.
Capiz
Officer in Charge of Station, Bureau of Forestry
Mati, Davao
4. Barros, Alberto
Abra
Lumber Grader, International Hardwood & Veneer Manufacturing Co., Pangil, Laguna
5. Caguioa, Vicente
Pangasinan
Employee, Chrysler Motor Corporation, Detroit, Michigan
6. Corales, Juan
Bohol
Ranger, Bureau of Forestry

7. Cruz, Leoncio A., LL.B.
Nueva Ecija
Attorney, Cabanatuan, Nueva Ecija
8. Daproza, Juan, B.S.F., M.F. (Montana State University)
Ilocos Sur
Assistant Forester, Bureau of Forestry
9. Gellidon, Quintin, B.S.C.E. (Mapua Institute of Tech.)
Rizal
Forest Supervisor-Forest Surveyor
Bureau of Forestry, Manila
10. Logan, Jose, B.S.F. (University of Idaho)
Isabela
Businessman, Ilagan, Isabela
11. Mabbayag, Felix, LL.B. (University of Manila)
Cagayan
Ranger, Chief, Statistical Section, Bureau of Forestry
12. Mataya, Ramon
Camarines Sur
Ranger, Bureau of Forestry
13. Parras, Vicente
Pangasinan
Ranger, Bureau of Forestry, Agri. College, Laguna
14. Quimpo, Timoteo
Capiz
Administrative Officer, Bureau of Forestry
Cagayan, Misamis
15. Salazar, Angel
Nueva Ecija
Ranger, Bureau of Forestry
16. San Pedro, Rafael
Bulacan
Administrative Officer, Bureau of Forestry
Naga, Camarines Sur.
17. Davis, S. N. Hsia
China
Employee, Filipinas Lumber Co., Manila
4. Fontanoza, Juan, B.S. (University of the Philippines)
La Union
Ranger, Bureau of Forestry
5. Lizardo, Leonor
Abra
Officer in Charge of Station, Bureau of Forestry
Claveria, Cagayan
6. Logan, Lorenzo
Isabela
Ranger, Bureau of Forestry
7. Medrano, Celso
Cagayan
Officer in Charge of Station, Bureau of Forestry
8. Montero, Pedro
Pangasinan
Officer in Charge of Station, Bureau of Forestry
Echague, Isabela
9. Oblina, Juan
Camarines Norte
Ranger, Bureau of Forestry
10. Pato, Miguel
Camarines Sur
Officer in Charge of Station, Bureau of Forestry
Gingoog, Misamis
11. Perez, Bonifacio
Leyte
Occupation not reported
15. Rarang, Gervasio
Pangasinan
Businessman, Dagupan, Pangasinan
13. Rebong, Leoncio
Laguna
Farmer, Mindoro
14. Siriban, Francisco
Cagayan
Officer in Charge of Station, Bureau of Forestry
Ilagan, Isabela
15. Songco, Florencio
Pampanga
Lumber Grader, Insular Lumber Co. Fabrica, Negros Occidental
16. Versoza, Florentino
Pangasinan
Officer in Charge of Station, Bureau of Forestry
Calbayog, Samar
17. Lee Nien Sung
China
Chinese Forest Service
18. Ling Yien Ying
China
Chinese Forest Service

Class of 1920

1. Acenas, Juan
Pangasinan
Ranger, Bureau of Forestry
2. Asiddao, Florencio
Cagayan
Ranger, Bureau of Forestry
3. Curaming, Amando
Tarlac
Public Land Inspector, Bureau of Lands

19. Tin Me Hai

China
Chinese Forest Service

Class of 1921

1. Abalos, Lucio
Ilocos Sur
Ranger, Bureau of Forestry
2. Allas, Daniel
Pangasinan
Ranger, Bureau of Forestry
3. Dagang, Gregorio
Pangasinan
Occupation not reported
4. Gomez, Celestino, D.D.S. (National University)
Rizal
Ranger, Bureau of Forestry
5. Granada, Leonardo
Camarines Sur
Ranger, Bureau of Forestry
6. Macaraeg, Cayetano
Pangasinan
Ranger, Bureau of Forestry
7. Makil, Jose
Ilocos Sur
Ranger, Bureau of Forestry
8. Montero, Simon
Ilocos Sur
Occupation not reported
9. Poblacion, Gregorio
Iloilo
Officer in Charge of Station, Bureau of Forestry
Kolambugan, Lanao
10. Quiaoit, Antonio
Ilocos Norte
Ranger-Forest Surveyor, Bureau of Forestry
11. Segueria, Justino
Tayabas
Ranger, Bureau of Forestry
12. Sulit, Mamerto D.
Batangas
Ranger, Bureau of Forestry
Asst. in Dendrology, School of Forestry
13. Tugade, Magdalena
Cagayan
Ranger, Bureau of Forestry
14. Zamuco, Gregorio, B.S.F. (Univ. of Washington), M.F. (Yale)
Pangasinan
Asst. Forester, Bureau of Forestry

Class of 1922

1. Adamos, Perfecto
Zambales
Forest Inspector, Bureau of Internal Revenue
2. Batika, Luis
Samar
Farmer, Calauag, Tayabas
3. Denoga, Norberto
Tarlac
Officer in Charge of Station, Bureau of Forestry
Cadiz, Negros Occidental
4. Diaz, Lorenzo
Pangasinan
Officer in Charge of Station, Bureau of Forestry
Margosatubig, Zamboanga
5. Drez, Eulogio
Pangasinan
Officer in Charge of Station, Bureau of Forestry
Limay, Bataan
6. Estrada, Joaquin
Pangasinan
Officer in Charge of Station, Bureau of Forestry
Lumban, Laguna
7. Florita, Prudencio
Zambales
Lumber Grader, Basilan Lumber Co., Zamboanga
8. Gimeno, Pedro
Sorsogon
Forestry Student, U. S. A.
9. Jucaban, Felix
Iloilo
Ranger, Bureau of Forestry
10. Lara, Victor
Laguna
Proprietor, Tinambak, Camarines Sur.
11. Lemos, Andres, B.S.F. (University of California)
Surigao
Forestry Student, Syracuse University, U. S. A.)
12. Masias, Andres
Leyte
Manager, Coconut Plantation, Asia, Neg. Occidental
13. Miguel, Cornelio
Isabela
Officer in Charge of Station, Bureau of Forestry
Puerto Princesa, Palawan

14. Pacheco, Juan
Leyte
Officer in Charge of Station, Bureau of Forestry
Surigao, Surigao
15. Porcioncula, Aquilino
Bulacan
Farmer, Cadiz, Negros Occidental
16. Quidilla, Rafael
Zambales
Ranger, Bureau of Forestry
17. Rabaya, Constantino
Cebu
Lumber Inspector, Manila Railroad Company, Manila
18. Raboy, Tomas
Cebu
Ranger, Bureau of Forestry
19. Salomon, Pio
Leyte
Ranger, Bureau of Forestry
20. Udarbe, Marcelo
Pangasinan
Employee, Hacienda Ibonan, Infanta-Baler, Tayabas
21. Umadhay, Pablo
Iloilo
Ranger, Bureau of Forestry
22. Viado, Balbino
Abra
Farmer, Fabrica, Negros Occidental
23. Apostol, Lamberto
Sorsogon
Forest Officer, British North Borneo
24. Mendoza, Nicolas
La Union
Forest Officer, British North Borneo
5. Brillantes, Buenaventura, B.S.C.E.
(Mapua Inst. of Tech.)
Ilocos Sur
Forest Engineer, British North Borneo
6. Cauagas, Ignacio
Zambales
Ranger, Bureau of Forestry
7. Cortez, Robert
Mt. Province
Occupation not reported
8. Daza, Raymundo
Samar
Farmer, Catarman, Samar
9. Eugenio, Miguel
Isabela
Officer in Charge of Station, Bureau of Forestry
Naga-Naga, Zamboanga
10. Flores, Fausto
Misamis
Ranger, Bureau of Forestry
11. Genove, Marcelino
La Union
Ranger, Bureau of Forestry
12. Guerrero, Faustino
Ilocos Norte
Forestry Student, University of Washington
13. Rola, Cecilio
Cagayan
Ranger, Bureau of Forestry
14. Ruiz, Quirino
Ilocos Norte
Officer in Charge of Station, Bureau of Forestry
Jolo, Sulu
15. Suarez, Valeriano
Iloilo
Officer in Charge of Station, Bureau of Forestry
Sipaco, Camarines Norte
16. Sulit, Aniceto
Laguna
Ranger, Bureau of Forestry
17. Tabamo, Geronimo
Tarlac
Ranger, Bureau of Forestry
18. Vega, Primitivo de la
Pangasinan
Ranger, Bureau of Forestry
19. Willie, Saquiapao
Mt. Province
Officer in Charge of Station, Bureau of Forestry
Bontoc, Mt. Province

Class of 1923

1. Agaloos, Pedro, D.D.S. (Philippine Dental College)
Abra
Ranger, Bureau of Forestry
2. Alviar, Hermenegildo
Pangasinan
Officer in Charge of Station, Bureau of Forestry
Infanta, Tayabas
3. Arafiles, Ricardo, LL.B. (University of Manila)
Ilocos Norte
Ranger-Attorney, Bureau of Forestry
4. Bitonio, Ambrosio
Cagayan
Ranger, Bureau of Forestry

20. Zambrano, Zoilo
Ilocos Norte
Employee, Sta. Clara Lumber Co.
Punta Flecha, Zamboanga
21. Evangelista, Basilio
Nueva Ecija
Forest Officer, British North Borneo
22. Melegrito, Fortunato
Tarlac
Forest Officer, British North Borneo
23. Orolfo, Pastor
Albay
Forest Officer, British North Borneo

Class of 1924

1. Abijay, Francisco
Misamis
Ranger, Bureau of Forestry
2. Antonio, Fabian
Tarlac
Ranger, Bureau of Forestry
3. Bañes, Emilio
Iloilo
Ranger, Bureau of Forestry
4. Colinares, Clemente
Samar
Ranger, Bureau of Forestry
5. Cruz, Vicente de la
Pangasinan
Ranger, Bureau of Forestry
6. Delizo, Teodoro
La Union
Ranger, Bureau of Forestry
7. Dumlao, Alfredo
Ilocos Norte
Ranger, Bureau of Forestry
8. Galenzoga, Mariano
Leyte
Teacher, Ormoc, Leyte
9. Guerrero, Martin
Ilocos Norte
Officer in Charge of Station, Bureau of Forestry
Legaspi, Albay
10. Guillen, Gabriel
Negros Occidental
Ranger, Bureau of Forestry
11. Jundak, Castor
Tayabas
Employee, Filipinas Lumber Co.,
Kabibihan, Tayabas
12. Loyola, Estanislao
Laguna
Ranger, Bureau of Forestry
13. Miranda, Jorge
Pangasinan
Officer in Charge of Station, Bureau of Forestry
Kabibihan, Tayabas
14. Orillo, Gregorio
Laguna
Ranger, Bureau of Forestry
15. Ramel, Domingo
Nueva Vizcaya
Ranger, Bureau of Forestry
16. Santos, Calixto
Tarlac
Ranger, Bureau of Forestry
17. Santos, Pantaleon
Ilocos Norte
Ranger, Bureau of Forestry
18. Semilla, Valentin, Jr.
Bataan
Lumber Inspector, Manila Railroad Co.
19. Seneca, Jose
Zamboanga
Timber Cruiser, Basilan Lumber Co.
Basilan, Zamboanga
20. Tamayo, Gerardo
Negros Occidental
Officer in Charge of Station, Bureau of Forestry
Port Banga, Zamboanga
21. Tongco, Conrado
Bataan
Forest Inspector, Bureau of Internal Revenue
22. Valdez, Adriano
Pangasinan
Officer in Charge of Station, Bureau of Forestry
Hinunangan, Leyte
23. Yutoc, Melencio
Pampanga
Lumber Inspector, Bureau of Audits
24. Pascual, Gabriel
Tarlac
Forest Officer, British North Borneo

Class of 1925

1. Abella, Ceferino
Cagayan
Forestry Student, U.S.A.
2. Antonio, Leandro A.
Masbate
Ranger, Bureau of Forestry
3. Buhay, Ricardo
Samar
Ranger, Bureau of Forestry
Assistant in Wood Technology,
School of Forestry

4. Castillo, Alfredo
Manila
Officer in Charge of Station, Bureau of Forestry
Catabaingan, Camarines Sur
5. Dayao, Leonardo
Bulacan
Officer in Charge of Station, Bureau of Forestry
Mercedes, Camarines Norte
6. Durian, Juan
Cagayan
Ranger, Bureau of Forestry
7. Fernandez, Regino
Cebu
Farmer, Tolong, Negros Oriental
8. Lagrimas, Martin
Camarines Sur
Ranger, Bureau of Forestry
9. Lardizabal, Agapito
Mt. Province
Ranger, Bureau of Forestry
10. Mencio, Jose
Mt. Province
Ranger, Bureau of Forestry
11. Miguel, Isabelo
Cagayan
Ranger, Bureau of Forestry
12. Pura, Amado
Sorsogon
Farmer, Sorsogon, Sorsogon
13. Pascua, Agustin
Ilocos Norte
Officer in Charge of Station, Bureau of Forestry
14. Reyes, Dalmacio
Pampanga
Ranger, Bureau of Forestry
15. Reyes, Rafael de los
Ilocos Norte
Ranger, Bureau of Forestry
16. Simbajon, Tiburcio
Bohol
Ranger, Bureau of Forestry
17. Tomboc, Jose
Pangasinan
Ranger, Bureau of Forestry
18. Torrea, Lucilo
Capiz
Ranger, Bureau of Forestry
19. Cabiling, Rafael
Leyte
Forest Officer, British North Borneo
20. Sales, Julio
Ilocos Sur
Forest Officer, British North Borneo

Class of 1926

1. Alomajan, Jose
Capiz
Ranger, Bureau of Forestry
2. Basconcillo, Marciano
Pangasinan
Ranger, Bureau of Forestry
3. Biscuña, Bernardo
Camarines Sur
Ranger, Bureau of Forestry
4. Croox, Delfin
Cavite
Occupation not reported
5. Dayag, Alfonso
Ifugao, Mt. Province
Ranger, Bureau of Forestry
6. Dumlao, Pablo
Ilocos Norte
Ranger, Bureau of Forestry
7. Enrique, Benigno
Rizal
Officer in Charge of Station, Bureau of Forestry
Fabrica, Negros Occidental
8. Galan, Victorio
Camarines Sur
Ranger, Bureau of Forestry
9. Paz, Januario, de
Leyte
Ranger, Bureau of Forestry
10. Ponce, Guillermo
Ilocos Sur
Ranger-Forest Surveyor, Bureau of Forestry
11. Pulido, Telesforo
La Union
Ranger, Bureau of Forestry
12. Roca, Jose
Antique
Ranger, Bureau of Forestry
13. Rondilla, Ramon
Tayabas
Officer in Charge of Station, Bureau of Forestry
Sumagui, Mindoro
14. Sabalo, Celestino
Misamis
Ranger, Bureau of Forestry
15. Salvilla, Roman
Iloilo
Ranger, Bureau of Forestry
16. Soriano, Wenceslao
Camarines Sur
Ranger, Bureau of Forestry
17. Tabbang, Abraham
Kalinga, Mt. Province
Ranger, Bureau of Forestry

18. Ulep, Nicolas
Benguet
Ranger, Bureau of Forestry
19. Valdez, Andres
Tarlac
Ranger, Bureau of Forestry
20. Vedad, Vicente
Antique
Farmer, Gingoog, Misamis
21. Agullana, Basilio
Ilocos Norte
Forest Officer, British North Borneo

Class of 1927

1. Acosta, Francisco
Nueva Viscaya
Ranger, Bureau of Forestry
2. Aviguetero, Victoriano
Tarlac
Ranger, Bureau of Forestry
3. Barte, Canuto
Antique
Ranger, Bureau of Forestry
4. Berbano, Santiago
Cagayan
Ranger, Bureau of Forestry
5. Bucaycay, Osencio
Benguet
Ranger, Bureau of Forestry
6. Clemente, Perfecto
Bulacan
Ranger, Bureau of Forestry
7. Culig, Jose
Cagayan
Ranger, Bureau of Forestry
8. Doza, Luis
Pangasinan
Ranger, Bureau of Forestry
9. Esguerra, Pastor
Bulacan
Ranger, Bureau of Forestry
10. Espinas, Anacleto
Masbate
Ranger, Bureau of Forestry
11. Espiritu, Arsenio
Cavite
Ranger, Bureau of Forestry
12. Faustino, Dominador
Bulacan
Ranger, Bureau of Forestry
13. Garcia, Anselmo
Nueva Ecija
Ranger, Bureau of Forestry
14. Gobuyan, Vicente
Capiz
Ranger, Bureau of Forestry
15. Guyguyon, Jack
Mt. Province
Ranger, Bureau of Forestry
16. Mercado, Casimiro
Rizal
Ranger, Bureau of Forestry
17. Perez, Antonio
Ilocos Sur
Ranger, Bureau of Forestry
18. Principe, Jose D.
Iloilo
Ranger, Bureau of Forestry
19. Razul, Abdul Patta
Sulu
Ranger, Bureau of Forestry
20. Santos, Narciso
Rizal
Ranger, Bureau of Forestry
21. Serevo, Tiburcio
Iloilo
Ranger, Bureau of Forestry
22. Tamayo, Mariano
Pangasinan
Ranger, Bureau of Forestry

Class of 1928

1. Altamirano, Gil
Batangas
Ranger, Bureau of Forestry
2. Balanon, Evangelista
Samar
Ranger, Bureau of Forestry
3. Baluyot, Ambrosio
Bataan
Ranger, Bureau of Forestry
4. Bello, Concepcion
Ilocos Sur
Ranger, Bureau of Forestry
5. Brillantes, Demetrio
Ilocos Sur
Ranger, Bureau of Forestry
6. Bucoy, Macario
Zamboanga
Ranger, Bureau of Forestry
7. Cabrera, Cenon
Pangasinan
Ranger, Bureau of Forestry
8. Chunuan, Teofilo
Benguet
Ranger, Bureau of Forestry
9. Cuasay, Alejandro
Batangas
Ranger, Bureau of Forestry
10. Daoey, Mark
Bontoc
Ranger, Bureau of Forestry

11. Ellazar, Narciso
Tayabas
Ranger, Bureau of Forestry
12. Española, Delfin
Antique
Ranger, Bureau of Forestry
13. Felix, Maximo
Tarlac
Ranger, Bureau of Forestry
14. Gray, Rosendo
Pangasinan
Ranger, Bureau of Forestry
15. Ilustrisimo, Juanito
Cebu
Ranger, Bureau of Forestry
16. Juson, Salvador
Negros Occidental
Ranger, Bureau of Forestry
17. Lalog, Nicanor
Batangas
Ranger, Bureau of Forestry
18. Mendoza, Demetrio
Tayabas
Ranger, Bureau of Forestry
19. Miguel, Angel F.
Cagayan
Ranger, Bureau of Forestry
20. Salvosa, Jose
Tayabas
Ranger, Bureau of Forestry
21. Sim, Esteban
Antique
Ranger, Bureau of Forestry
22. Villamater, Jose D.
Tayabas
Ranger, Bureau of Forestry
23. Weinmann, Barnard
Pampanga
Ranger, Bureau of Forestry
24. Yolores, Bernardo
Tayabas
Ranger, Bureau of Forestry
25. Tutuan, Adriano (Pensionado, Bur. of
Education)
Benguet
Teacher, Bureau of Education
4. Cuenco, Antonio
Manila
Ranger, Bureau of Forestry
5. Dagñalan, Arsenio A.
Masbate
Ranger, Bureau of Forestry
6. Dañez, Irineo P.
Tayabas
Ranger, Bureau of Forestry
7. Dueñas, Irineo B.
Batangas
Ranger, Bureau of Forestry
8. Estabillo, Nicolas O.
Nueva Viscaya
Ranger, Bureau of Forestry
9. Fernandez, Epifanio B.
Pangasinan
Ranger, Bureau of Forestry
10. Hill, Eduardo M.
Laguna
Ranger, Bureau of Forestry
11. Lagaya, Alfredo A.
Tayabas
Ranger, Bureau of Forestry
12. Libadia, Braulio C.
La Union
Ranger, Bureau of Forestry
13. Luczon, Cornelio V.
Ilocos Sur
Ranger, Bureau of Forestry
14. Madlangbayan, Eugenio
Batangas
Ranger, Bureau of Forestry
15. Malaggay, Teodoro
Mt Province
Ranger, Bureau of Forestry
16. Montillo, Gavino P.
Abra
Ranger, Bureau of Forestry
17. Nablo, Severino Uy
Samar
Ranger, Bureau of Forestry
18. Payumo, Francisco A.
Zambales
Ranger, Bureau of Forestry
19. Rayos, Jose A.
Cavite
Ranger, Bureau of Forestry
20. Santos, Salvador S.
Manila
Ranger, Bureau of Forestry
21. Tuaño, Lorenzo S.
Rizal
Ranger, Bureau of Forestry
22. Ulangkaya, Ebad B.
Cotabato
Ranger, Bureau of Forestry

Class of 1929

1. Arce, Pedro F.
Zambales
Ranger, Bureau of Forestry
2. Barrios, Primitivo
Zamboanga
Ranger, Bureau of Forestry
3. Busque, Jose
Abra
Ranger, Bureau of Forestry

Class of 1930

1. Agaloos, Vicente
Abra
Ranger, Bureau of Forestry
2. Alcantara, Urbano M.
Abra
Ranger, Bureau of Forestry
3. Alojipan, Eligio
Antique
Ranger, Bureau of Forestry
4. Andrada, Jose R.
Capiz
Ranger, Bureau of Forestry
5. Ariola, Ciriaco A.
La Union
Ranger, Bureau of Forestry
6. Asagra, Pedro B.
Albay
Ranger, Bureau of Forestry
7. Caayupan, Magdaleno
Misamis Oriental
Ranger, Bureau of Forestry
8. Caccam, Daniel R.
La Union
Ranger, Bureau of Forestry
9. Catindig, Brigido
Manila
Ranger, Bureau of Forestry
10. Chinte, Felix
Bataan
Ranger, Bureau of Forestry
11. Contreras, Leonardo G.
Bulacan
Ranger, Bureau of Forestry
12. Cunanan, Carlos D.
Bulacan
Ranger, Bureau of Forestry
13. Dolendo, Domiciano M.
Iloilo
Ranger, Bureau of Forestry
14. Fajatin, Tomas M.
Ilocos Sur
Ranger, Bureau of Forestry
15. Flores, Casimiro S.
Pampanga
Ranger, Bureau of Forestry
16. Leaño, Celestino N.
Isabela,
Ranger, Bureau of Forestry
17. Ledesma, Santiago A.
Capiz
Ranger, Bureau of Forestry
18. Mabesa, Juan S.
Occidental Negros
Ranger, Bureau of Forestry
19. Malacoco, Evangelino V.
Laguna
Ranger, Bureau of Forestry
20. Malibiran, Eufrazio V.
Bataan
Ranger, Bureau of Forestry
21. Manalo, Tomas
Manila
Ranger, Bureau of Forestry
22. Manuel, Marcelo
Cagayan
Ranger, Bureau of Forestry
23. Mapiscay, Pablo T.
Masbate
Ranger, Bureau of Forestry
24. Mariano, Cipriano
Rizal
Ranger, Bureau of Forestry
25. Mella, Leocadio B.
Albay
Ranger, Bureau of Forestry
26. Regondola, Segundino
Albay
Ranger, Bureau of Forestry
27. Solsona, Floro
Albay
Ranger, Bureau of Forestry
28. Tuting, Manuel L.
Antique
Ranger, Bureau of Forestry
29. Villanueva, Mamerto M.
Batangas
Ranger, Bureau of Forestry
30. Yap-Diango, Vicente
Capiz
Ranger, Bureau of Forestry
31. Zablan, Dalmacio
Tarlac
Ranger, Bureau of Forestry

DECEASED GRADUATES

1. Fernando Amarillas	'12	12. Felipe Quevedo	'18
2. Donato Miranda	'12	13. Getulio Selorio	'19
3. Numeriano Atrebido	'13	14. Pedro Valentin	'19
4. Eusebio Leuterio	'13	15. Pioquinto de la Vega	'19
5. Eulogio Recio	'13	16. Luis Adona	'20
6. Benigno Alejandro	'14	17. Hermenegildo Bautista	'21
7. Santiago Tomeldan	'14	18. Primo Icarañgal	'22
8. Felix Bawan	'15	19. Doroteo Antonio	'23
9. Pastor de la Peña	'15	20. Sabas Sabado	'24
10. Teodoro Teczon	'15	21. Sulpicio Aquino	'26
11. Teodoro Colcol	'17	22. Onofre Ladia	'28

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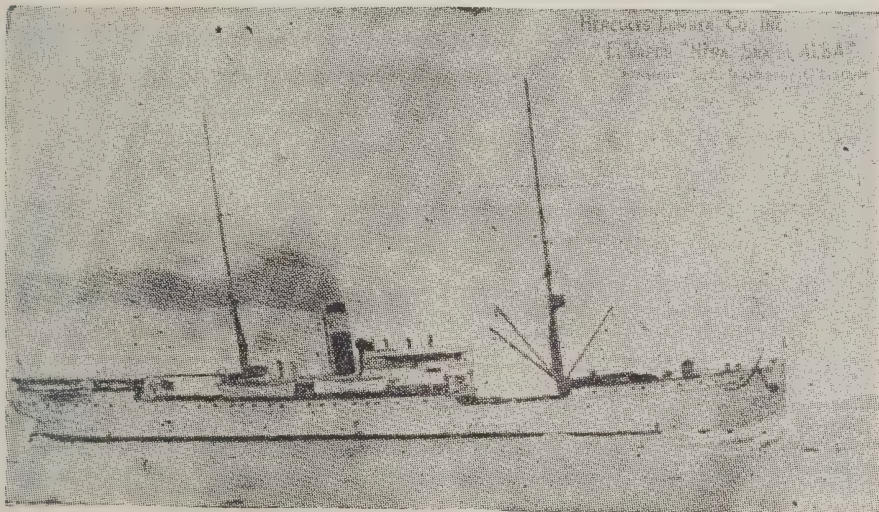
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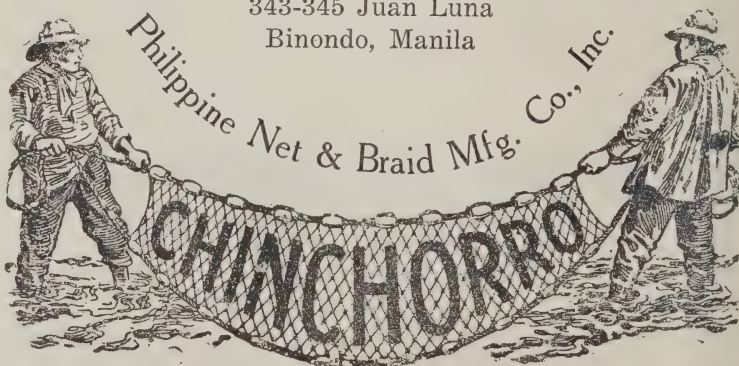
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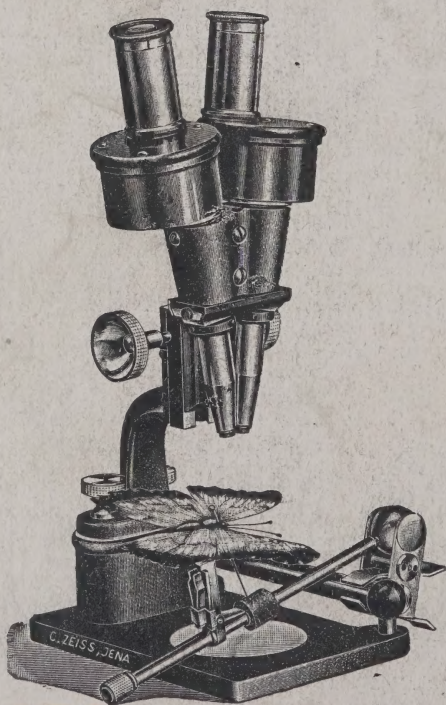
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